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The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD OF HEALTH

This Bulletin will be sent free to any citizen of the State upon request.

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Vol. XLIX

JANUARY, 1934

No. 1

NORTH CAROLINA HEALTH CALENDAR for 1934

Some Things Our Citizens Should Endeavor To Do

1. Reduce the infant death rate.
2. Reduce the maternal death rate.
3. Extend organized health service to every county.
4. Increase the per capita consumption of safe milk.
5. Work for the day when no citizen shall suffer or die from a preventable disease.
6. Continue the efforts to completely eradicate pellagra and small-pox.
7. Immunize every baby in the State against diphtheria at six months of age.
8. Extend the benefits of approved sanitary facilities to include every rural home.
9. Provide competent prenatal medical service and medical care for all maternity cases.
10. Through regular and thorough medical examination and consistent medical care prevent untimely deaths from such killers as cancer, tuberculosis, and the many diseases of heart and kidneys.
11. Secure a more widespread system of medical supervision of the health of school children, with a more effective system of follow-up which will provide for the removal of all remediable physical handicaps; and care for every malnourished child in the commonwealth.
12. Strive for a health-minded population who will eventually realize the benefits of positive health, and who will be just as willing to pay for competent medical and dental service when needed to preserve good health as they are now ready to pay out money for any of the other desirable possessions of life.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	Health Education	Scarlet Fever
Cancer	Hookworm Disease	Smallpox
Constipation	Infantile Paralysis	Teeth
Chickenpox	Influenza	Tuberculosis
Diabetes	Malaria	Tuberculosis Placards
Diphtheria	Measles	Typhoid Fever
Don't Spit Placards	Pellagra	Typhoid Placards
Eyes	Residential Sewage	Veneral Diseases
Flies	Disposal Plants	Water Supplies
Fly Placards	Sanitary Privies	Whooping Cough
German Measles		

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)	Baby's Daily Time Cards: Under 5 months;
"Our Babies"	5 to 6 months; 7, 8, and 9 months; 10,
Prenatal Letters (series of nine	11, and 12 months; 1 year to 19 months;
monthly letters)	19 months to 2 years.
Minimum Standards of Prenatal Care	Diet List: 9 to 12 months; 12 to 15
Breast Feeding	months; 15 to 24 months; 2 to 3
Infant Care. The Prevention of	years; 3 to 6 years.
Infantile Diarrhea.	Instructions for North Carolina Midwives.
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Notes and Comment

A NEW YEAR lies before us. A new year with new possibilities, new liabilities, new adventures, new disasters, and new opportunities spreads out before us like an unknown road. The only criterion we have for intelligent speculation as to what mankind may expect during this new year is by a study of what the innumerable new years of the past have disclosed. In many respects this new year begins at a time when conditions all over the world are probably more disturbed than at any other time since the beginning of recorded history. The years of the World War were upsetting, but many thickly populated regions of the earth scarcely knew what was going on. The years of the American Revolution and of the French Revolution upset the world very largely, and yet such densely populated countries as China knew nothing of what was going on outside of their own country. At present there is not a civilized or half-civilized country in the world but what is in an unstable condition.

For our own country, and for North Carolina in particular, our concern is for the protection of the public health. It is interesting to note a comparison which may or may not be altogether to the credit of the present organization of the State Board of Health. The reason we make that statement is that the present organization have means and personnel which were lacking twenty-five years ago. Twenty-five years is not a very long period as time is recorded. In THE HEALTH BULLETIN for January, 1909, just twenty-five years ago, among other things, the late Dr. Richard H. Lewis, at that

time Secretary of the Board and State Health Officer, printed the following appeal to the General Assembly, then in session:

"The great work is the general work of the Board of Health. A *sine qua non* in the proper performance of this work is a competent Secretary, who shall be required to devote his whole time to it. Such a man, one who has proven himself a success, cannot be obtained for less than three thousand dollars a year. He should have a good assistant for the office work, while he is absent, investigating outbreaks of disease and educating the people by public addresses and by advice to health boards and health officers. This assistant should also have charge of the collection and tabulation of vital statistics. A first-class stenographer is a prime necessity."

Doctor Lewis, in this editorial, points out that his total income as State Health Officer was \$750, that he had to make his living by the practice of medicine, and that as a consequence the health work of the State had necessarily been a side issue and a secondary matter. Doctor Lewis speaks of "health officers." He meant part-time physicians. There was not a whole-time health officer in the State at that time, and not until many years afterward.

Be it said to the credit of the General Assembly, it responded with enthusiasm to Doctor Lewis's appeal and made provision for a whole-time State Health Officer and an "assistant for office work," and a "first-class stenographer," which Doctor Lewis was pleading for, and a lot more. On July 1st following, Dr. W. S. Rankin, the

State's first whole-time State Health Officer, assumed his duties. Today there is an average of about eighty-five whole-time employes of the State Board of Health. In place of an office assistant to "have charge of the collection and tabulation of vital statistics," there are about eighteen whole-time employes in that department alone. At present there are about ten stenographers instead of the one first-class stenographer Doctor Lewis was requesting.

The question for the present organization is this: Have we, in accordance with the opportunities which have been ours for the work of the public health, done as much with our means as Doctor Lewis accomplished with his \$250-a-year statistician? We leave it to the people of North Carolina to render judgment. Doctor Lewis's chief contribution was in the building of a foundation of good-will and the creation of a desire on the part of the people for the right kind of public health service.

We hope that the contribution of the present organization has measured up fully to what might have been expected of it. We know that some diseases have been almost eliminated; some diseases which were very prevalent twenty-five years ago have become rare at this time. Twenty-five years ago we had no means of preventing diphtheria; we had no means of preventing typhoid fever, except through sanitation; we had the means for preventing smallpox, but for lack of organization and money to pay for public health service that disease was very prevalent. Many deaths occurred every year. At this time we still have diphtheria with us. We do not yet have a tabulation of deaths occurring in 1933 from diphtheria, but we know there were a large number that could and should have been prevented. Although, by means of preventive treatment and improved sanitation everywhere, typhoid fever has been greatly reduced, it is still prevalent in many sections of the State. The eradication of preventable diseases is a slow and tedious process. Practical knowledge about how to prevent disease and how

to protect one's health is educational matter in which each individual may obtain information for himself. Health education is a perennial interest; the story has to be repeatedly told, and our work is not yet done. It never will be finished.

If we are able to make the same progress during the next twenty-five years that we have in the last twenty-five, in January, 1959, some future editor of THE HEALTH BULLETIN may be writing in these columns that typhoid fever, diphtheria, tuberculosis, and all the other preventable diseases are gone from the confines of North Carolina. Let us hope that the part we may play this year will advance the cause more than any other year in the past.

* * *

FROM time to time we have called attention in THE HEALTH BULLETIN to the menace of trichinosis, that is, a parasitic infection in pork. We try to do this sometime during every winter in order to warn our folks who might be inclined to eat their pork raw, or half-cooked. Outbreaks of this malady occur at frequent intervals all over the country. It is caused by a parasite in hogs, and it is said that between 2 to 5 per cent of all the hogs in the United States are infected.

Infected pork has been discovered in practically every section of the country at one time or another. There is no present method of meat inspection which will discover the presence of this parasite. We mention this so that people in the cities and towns will place no reliance whatever on a meat inspection service. The meat inspectors in all of the larger cities and towns of the State protect the people from many sources of disease by discovering meat that is not fit for human consumption; but, as just stated, there is no form of inspection yet discovered which will enable an inspector to find the evidence of trichina in the meat. With the ever increasing consumption of "hot dogs" and other half-cooked or downright raw pork at all kinds of roadside stands all about over the State, it is very necessary to put people on their

guard against this infection. Once the parasite is established in the tissues of the human body, it is very hard to eradicate. There is no known medical treatment which is effective in curing a patient. In many cases the symptoms of the disease are very similar to typhoid fever.

Late in the summer, in Westchester, New York, the health officer for that county reports that nine families, comprising thirty-four individuals, all mutually acquainted, spent a few days at a camp. Later all suffered from the disease. They had the customary habit of many campers, of building a camp-fire and cooking their own food outdoors, specializing in frankfurters and hamburgers, the latter composed of about three parts of beef to one part of pork. Cooking before an open fire outdoors naturally meant that the food was not even half-cooked. Other sections of the country have reported having had trouble with this infection from time to time; for example, the Connecticut Board of Health has recently reported 107 cases of the disease having occurred in that state during the past ten years. The parasite is easily destroyed by cooking the meat thoroughly before eating it. The main danger in outdoor cooking and in cooking pork sausage and so on in frying pans is that the outside portion may be cooked sufficiently hot, heating to 145 degrees or more, which will destroy the parasite; but the inside of the portion, not being heated to any such temperature in a shallow pan or before an open fire, is not thoroughly cooked, and the parasite is not killed; therefore, infection easily follows eating such half-cooked meat.

The purpose of this mention here is to urge upon people again, for their own protection, the importance of thoroughly cooking all pork before it is eaten.

* * *

RIDING along the road the other day in Cumberland County, the editor noticed a roadside sign which read something like this: "One mile to John Smith's gristmill and dairy." If such a sign could be located about every ten miles on all public roads in

North Carolina, deficiency diseases, such as pellagra, would soon become but a memory. This sign, indicating a plentiful supply of freshly ground corn-meal from sound native corn, and fresh milk and all the dairy products that go with it, reminded the editor that Dr. James A. Tobey sometime ago wrote a very interesting article under the title of "Bread, the Universal Food." Doctor Tobey made the following statement: "Malnutrition can be averted at all times, and especially in periods of economic stress, by following one simple rule. According to the consensus of scientific opinion, it is merely this: build the daily diet around bread and milk."

That should be the ticket for North Carolina this coming year: build the daily diet of every family around milk and bread. Bread does not necessarily mean corn-bread alone, but white-flour bread, whole-wheat bread—bread of different kinds. Add to this the necessary variety of vegetables, eggs, fruit, and some meat, and any family has a diet that protects, provides fuel and energy for the daily needs of adults, and for the health and growth demands of growing children. In short, this Cumberland County roadside mill and dairy owner is prepared to supply to his neighbors and customers the elements which Doctor Tobey considers the foundation of the daily diet. All the rest should be built around that.

* * *

THE editor's official duties took him about a good bit over the State during the fall, and always on the alert for items which would be beneficial to the readers of THE HEALTH BULLETIN, he makes it a point to look about him on his travels. Late in November he had occasion to visit several points in Eastern North Carolina. Passing through one fine little town about one o'clock, and noticing that the town looked so clean and the odors around the hotel were so appetizing, he pulled up to the curb and parked and decided to take his midday meal right there. Opening the door, he entered the coffee shop of the local hotel from the street entrance. He

stepped into as clean and appetizing place as he has visited in a long time. The room and the floor and the tables and the linen were all spotless. The food was well prepared, well balanced, clean, and wholesome. As the day was cold, the editor yielded to what some people would call his "bad habit," and called for a cup of coffee. It came steaming hot, and looked good. Accompanying the coffee, however, was a tiny container about two-thirds full of milk. Eastern North Carolina simply will look on milk as too precious for human consumption. Fixing the coffee up, however, and getting a taste, he discovered that the milk was canned condensed milk, something that he could never endure. It well-nigh destroyed the joy in the meal entirely. The thought of having to put up with canned condensed milk in a section that should be literally flowing with milk and dairy products was too much.

Now here comes the funny part of the experience. More or less determined to have his coffee anyhow, he requested the waitress to take the oily, greasy, condensed-milk mixture back and to bring along some plain coffee. She readily agreed, but like a good waitress inquired the trouble. On being told, she replied: "Oh, we have some fresh milk if you prefer it."

She returned to the refrigerator and brought out from a carefully hidden corner about a thimbleful. So the editor got his coffee flavored, at least, with fresh milk. Further inquiry brought out the information that most of their customers took their coffee straight or preferred condensed milk; but during the last year or two "more cranks seemed to be coming along who insisted on fresh milk." And frankly she did not like the way these "cranks" insisted on Grade A Milk.

The reader may imagine the editor's delight that night on reaching his destination late and cold in another fine little town still farther east, on walking into the hotel restaurant, to see State Board of Health posters all over the place announcing "Grade A Milk Sold Here." And when the coffee came in it was accompanied by a man-sized pitcher of real fresh cream. What with some of the finest trout fresh from the sea and superbly cooked—but that is another story.

Now, that Governor Ehringhaus has succeeded in getting the farmers of the eastern section a living price for their tobacco, perhaps he can induce them to invest some of their surplus cash in good milk cows. What a break that would be for the many thousands of fine children who need milk for proper growth, but who do not get it now.

Psittacosis

Rules and Regulations for the Control of Psittacosis

BY virtue of the authority vested in the North Carolina State Board of Health, under Consolidated Statutes, Chapter 118, Public Health, Article 9, Section 7151 to Section 7155, the State Board of Health, on August 15, 1933, declared psittacosis to be an infectious disease; and subject to laws and regulations governing notification and methods for dealing with sources and modes of infections of such diseases.

NOTIFICATION: 1. Cases of psittacosis must be reported within twenty-

four hours—preferably by telephone or telegraph.

ISOLATION: 2. The patient sick with psittacosis shall be isolated in a separate room, and no person other than the local health officer or his representative or a representative of the State Board of Health, the attending physician, the nurse, or attendant, shall be permitted to enter the room in which the patient is isolated or quarantined.

In the event a friend or member of the family should desire to be with

the sick one, such a person shall remain in quarantine for such a time as the local or State Health Department may determine.

Concurrent disinfection of all discharges and articles must be carried out and terminal disinfection instituted.

QUARANTINE: 3. The premises in which the patient is isolated are to be placarded and quarantine instituted until complete clinical recovery or death of the patient.

CONTACTS: 4. It is advised that household contacts be kept in quarantine for at least five days following last exposure, and under close observation for at least three weeks. The exact incubation period of psittacosis is unknown, but can be very long and drawn out. Less intimate contacts should be kept under careful observation as far as possible.

BIRDS: 5. Canaries, macaws, parrots, parrakeets, and other psittacine birds that have been exposed to psittacosis, either through birds known to be infected with psittacosis or having

been associated with birds proven to be probable sources of human cases, must be killed and burned promptly. This measure is to be ordered either by the city, county, or State Department of Health in each case, and no indemnity provided.

Birds not of the psittacine family are all to be regarded as potentially dangerous when they have been exposed to psittacosis, and after exposure must be kept under close supervision and quarantine for a period of not less than three weeks, and then released only if no sign of psittacosis has occurred amongst them.

SHIPMENT: 6. Shipment of birds into North Carolina by any means of transportation whatever shall conform to the regulations of the Federal Government covering this point.

The above rules and regulations were adopted and approved by the Executive Committee of the State Board of Health in session on December 5, 1933, and ordered promulgated.

JAMES M. PARROTT,

*Sec.-Treas., State Board of Health,
and State Health Officer.*

About First and Latest Presidents N. C. State Board of Health

BEFORE we had time to comment on the editorial of Editor Peterson in his journal for September 1st about Dr. Satchwell, our friend, John M. Gibson, editor of the *Sanatorium Sun*, came along in his October issue quoting the editorial as follows:

"The following brief article, headed 'A Great Old Physician,' appeared in *The State's Voice* for September 1, and no doubt will be of much interest to patients, ex-patients, and friends generally of the N. C. Sanatorium:

"My mind was carried back to a great old physician when I met Quincey Satchwell the other day. He is a son of Dr. S. S. Satchwell, who died nearly two score years ago. Dr. Satchwell was one of the few physicians in the State who had studied abroad. He was a graduate of a Paris univer-

sity, and it was over there that he got the poison in his system that affected his nose in such a way as to make him a marked man for the rest of his life.

"Highly educated as he was, and skillful physician that he was, he spent the greater part of his life in country or village practice. He was an old man when I went to Burgaw as a teacher forty-one years ago, but he was still intellectually strong. The theory of ozone as a product of the pitch-pine forests was Dr. Satchwell's, if I mistake not. Anyway, he was a champion of it, and that doctrine, with the inferred effects upon consumption of residence in the pine belt, had no little influence in turning the one-time flow of consumptives to the sandhills of North Carolina, whatever merit

there was, or is, in the theory. The theory is probably responsible, also, for the location of the State Tuberculosis Sanatorium where it is."

This was a most interesting reminder to us for the reason that Dr. Satchwell was the first member of the N. C. State Board of Health and its first president. Both Editors Peterson and Gibson failed to mention that fact, possibly because neither knew about it. So, for the benefit of all of our readers, we quote the following paragraph from a paper written by the editor of THE HEALTH BULLETIN a few years ago:

"On May 23, 1877, during the meeting of the North Carolina Medical Society, which was held that year at Salem, North Carolina, Dr. S. S. Satchwell, of Rocky Point, Pender County, was made the first president of the State Board of Health, and Dr. Thomas Fanning Wood its first secretary, these officials being designated as 'chairman' and 'secretary,' respectively, of the committee of the State Medical Society having in charge the fortunes of the newly proposed State Board of Health. This meeting was immediately following the adjournment of the Legislature that year, at which time the first law creating the board was enacted. It may be interesting to note in passing that on that occasion Dr. Satchwell read an important paper entitled, 'Duties and Usefulness of the State Board of Health.' This paper made such an impression that the society voted unanimously to remit all dues to Dr. Satchwell for the remainder of his life 'as a slight testimonial of the regard of the society.' On that day the first machinery of organizing the State Board of Health was definitely set in motion."

On Monday, November 13, 1933, Dr. Carl V. Reynolds, of Asheville, was elected president of the State Board of Health. From May 23, 1877, to November 13, 1933, is not a very long period, as time is measured; but much history has been made by the State Board of Health in those fifty-six years. Not many men have served as president of this organization, possibly a half-dozen, and not one of them

has been held in higher esteem by his fellows than Dr. Satchwell, its first president. Dr. Reynolds has been a valued member of the Board for two years, but, of course, he has not yet had an opportunity to establish a reputation as president. However, he is not without a record in his home town. Lest the editor, as a minor employe of the Board, be suspected of "boot-licking" his chief, we will let the *Asheville Times* present the new president to our readers:

"A pioneer in public health work is again deservedly honored in the unanimous election of Dr. Carl V. Reynolds, of Asheville, as president of the North Carolina State Board of Health.

"Those who knew not the Asheville of the nineties nevertheless have heard how Dr. Reynolds, as city health officer, put Asheville on the public health map of the United States.

"He had peculiar gifts for the work, and especially for the unceasing, never-wearying, many-sided educational labors which public health in those days demanded far more than now.

"Health Officer Reynolds stirred up the professional brethren, and the alert and the lazy laymen, on such subjects as pure milk, the wrapped loaf, and a vigorous warfare on the housefly.

"His bacteriologist and field marshal was the late Dr. L. M. McCormick, and Reynolds and McCormick swatted the fly with swats that, if not heard around the world, were heard all around the United States. Before that battle began in Asheville, most people in this country had accepted the common fly as part of the common fate that had to be endured, no matter what the cost.

"This is recalled here to emphasize once more the State's good fortune in having Dr. Reynolds on the State Board of Health. The Board's work is now severely limited in some phases of it by the general trimming down of the State budget. Dr. Reynolds can be counted upon to cry aloud and spare not in arousing the people to preserve what they have in public health achievements, and to press onward at every opportunity."

Infectious Diseases We Don't Talk About

By WM. D. RILEY, Consultant, Venereal Disease Control

THERE seems to be an instinctive disposition on the part of most people to avoid looking unpleasant facts in the face. This disposition is manifested not only when individuals are confronted with the daily problems of life, but it is also all too frequently evidenced in problems of disease. Especially is this true in the case of that group of infectious diseases known as venereal, of which syphilis and gonorrhea are the most important as public health problems.

The idea that the venereal diseases are spread through intimate personal contact has seemed and still seems repugnant to some minds. But this repugnance is due, perhaps, to a confusion of thought in those minds rather than to any essential objection in the conception of these diseases.

Because of this confusion of thought the venereal diseases have too long been camouflaged under the term "social diseases," a term which justly includes all infectious diseases. While the origin of this term can be readily understood by even the most unimaginative, when used in this way it is an unfortunate commentary on human nature. It is true that essentially we are social. Indeed, if we are to live our lives fully and completely we must be socially inclined. In order to maintain our balance of sanity and health it is quite necessary that we share the warm companionship of our fellow beings. Without this desire for social contact, or when shunned by society, people eventually fall subject to mental disorders, usually. Someone has said that the three great human drives are "being social, occupation, and love." Being social includes the other two. But the ironic part of it is that in being social so much tragedy frequently descends upon man.

Due to the fact that the venereal diseases are spread largely through sex contact, they have, until recent years, been looked upon as the skeleton in the closet of society. They were

considered the inevitable wages of sin. They were hidden behind a thick veil of secrecy. A great wall of science was built up around them. They were considered unmentionable in mixed groups, and when discussed at all, they were talked about in whispers. They were considered just retribution for promiscuity instead of serious communicable diseases that not only rob its victims of health and happiness and even life itself, but endanger others in social contact with them.

But the curtain has been raised on the vast fester of venereal disease which, like some huge poisonous octopus, has been spreading its infected tentacles indiscriminately into countless thousands of individuals and disintegrating the social and economic fabric of the nation.

Prior to the year 1917 comparatively few people had either any idea of the prevalence of the venereal diseases or any knowledge of their disastrous effects. But the importance of syphilis and gonorrhea in depleting the manpower of the country was forcibly brought to public attention during the World War.

When the first million draftees were being examined for physical fitness those who were found to be venereally infected were rejected as being unfit to assume the burdens and responsibilities of warfare. The rate of infection among these men was so alarmingly high as to startle the military authorities; and amazing as it may seem, the number of men thus rejected was so great that it was believed impossible for America to raise an army of sufficient strength to carry on its part of the war unless infected men were accepted and made fit to fight. Accordingly, the men who were returned to civil life in the first draft call on account of venereal infection, and those found to be venereally diseased in subsequent draft calls, were inducted into service, placed in base hospitals, and

treated before they were instructed in military tactics.

Prior to that time, too, not enough thought was given to these diseases to cause any action to be taken to control them. Very little thought was given to those persons who innocently contracted these diseases, and practically no effort was made to extend aid to the helpless. And the vast force of sex, the motivating power of humanity, the lever for both good and evil, happiness and misery, through the medium of which the venereal diseases are usually transmitted, was almost entirely ignored.

It is indeed tragic that the urge for happiness and the search for companionship and gaiety should oftentimes have such dire results as venereal disease, not only to the individual alone, but even "unto the third and fourth generations." The homes for the feeble-minded, the institutions for the blind and the deaf, and the hospitals for the insane are harsh proof of this deplorable fact.

Now, it seems strange that well-informed men and women are commonly quite uninformed concerning the nature of the extremely dangerous and highly prevalent venereal diseases; and it seems stranger still that, in many instances, these same men and women are content to remain uninformed on the subject.

Knowledge regarding the venereal diseases which cause so many damaged lives and which can be so easily and so innocently contracted should not be repellant to intelligent minds. An infected husband or wife may unwittingly infect a marital partner. Through no fault of its own, a baby may be blinded at birth by gonorrhea, or may be born dead as a result of syphilis, or, if it lives, may be so riddled with the disease as to make life itself seem a great misfortune. Little girls frequently contract gonorrhea from contact with older persons and from careless nursery attention. And occasionally either disease is contracted innocently in places where it is least suspected. All such persons need protection. As a matter of fact, these innocent persons are

very apt to suffer more severely in case they become infected than those who are familiar with the nature and effects of syphilis and gonorrhea and who know that they have been exposed to infection.

Persons who are uninformed concerning syphilis and gonorrhea and innocently exposed to infection do not have this protection. Consequently, such persons may not as a rule seek early diagnosis and early treatment, both of which are so necessary to prevent the disastrous effects of these diseases when they go untreated, or when treatment is unduly delayed.

Nature does not take into consideration the manner in which infection was contracted. Whether infection occurs when folly lures or when the witchery of the season entices; whether it occurs after known or after innocent exposure to the disease; whether it occurs among young girls or young boys who, when thrown willy-nilly into the whirlpool of life, and motivated by one of the most powerful and subtle forces of nature, break through the warning signals of danger; or whether it occurs to the rich or the poor, the learned or the ignorant, the saint or the sinner, the spark is fanned to the flame just the same.

As long as there are persons with venereal disease in its infectious stages, there is an ever potential danger to all those whose lives they touch. It must be emphasized, however, that there is practically no danger to those persons who refrain from willful exposure to infection and who are intelligent enough to observe good rules of personal hygiene.

Each normal individual is endowed with his due share of intelligence and judgment. Yet in spite of that we have traffic ordinances with lights on every corner to guide the motorist who, if he is able to drive a car, should be able to guide it successfully through traffic. But the law, like a stern and thoughtful parent, sees to it that the driver, whether he be capable or not, follows the lights.

There is no disgrace attached to these laws, and they are more or less cheerfully obeyed. The shunted pariah, venereal diseases, are far more dangerous than the reckless driver, more far-reaching than cancer and tuberculosis, and more devastating than both of them combined. Yet many people are too often prone to ignore the warning signals of these diseases, and of which so many people have been reluctant to talk about openly and frankly.

There can be only one reasonable attitude toward the venereal diseases. They are dangerous and deceptive communicable infections that should and must be considered on the same basis as other infectious diseases. And they must be stamped out if man's most precious heritage—good health—is to be protected and preserved. Only by being well informed on these diseases, and, being well informed, speak about them frankly

and forcefully in the proper circumstances, can this be accomplished.

People are more and more adapting their thought to the conditions of a changing world. Happily, this is true also with respect to the venereal diseases. As recent as a decade ago it would have been considered a breach of good manners to have mentioned the venereal diseases in public in the unadorned terms of syphilis and gonorrhea. Since then there has been an ever increasing tendency to regard these diseases as serious communicable infections, concerning which the public is not only constantly seeking information on measures of prevention and treatment, but, in many instances, is demanding that they be brought under control.

This emancipation of thought, together with a constant growing public interest in the venereal disease problem, constitutes one of the greatest social gains in recent years.

Eating Habits

By ERNEST A. BRANCH, D.D.S., Director Division of Oral Hygiene

YOU remember when you were a child, your mother was constantly telling you not to touch the stove. You will also remember that the warning carried little weight with it until you learned once and for all and for yourself just why you must not touch it, and if touched what dire and dreadful results followed. That is the best way on earth to learn that fire burns, but costly—very costly.

Public Health has a much harder time of it than a mother, and many of the evils and dangers against which it warns are not as sudden as getting burned. There is one thing to be said for fire: it burns immediately, and with one such experience that lesson is learned for life. With this as illustration, it is obvious that Public Health must warn and hope, and keep on warning and keep on hoping. With even more children than the Old Woman Who Lived in a Shoe, and a great number of them

grown-up children, what is it to do except to keep after them?

And it must teach them not just the simple lessons which carry with them so strong a moral, but must instruct them so as to live not merely longer lives, but more abundant lives, and teach them how to keep well, and by keeping well, being happy, instead of dragging around, half-sick and with a grouch. It must also teach that the effects of neglecting health are not so immediate, perhaps, as the pain of a burn, but are much more far-reaching and more crippling in the end.

What if a tooth fell out every night when you were "too tired to brush your teeth"? That is drastic, of course, but if it were true, then before long there would be so many horrible examples that we would soon learn that lesson. It usually takes so long for neglect to show that we think we are safe and console ourselves by saying, "One more

night won't matter," "I just can't get Johnny to eat turnip greens and collards," "You know, I just have to force milk down Sally," and "I am so outdone with little Rachel about her eating. You know I have reached the point where I almost hate to go to the table because we have to beg and coax Rachel to eat the things she ought to have, and I do wish you would tell me how to get her to eat foods that will make teeth and bones."

Well, that is just the thing we want to talk to you about, because if you could see little Rachel's mouth, you would find it is literally shot to pieces so far as teeth are concerned. She is about five years old, pale, anæmic, and does not like to get out and romp and play with the other children. Her mother says she is full of cold nearly all the time; her breath is bad. Now, if we could get the entire picture, I suspect we would find that her mother and dad are just about as careless in their health habits as little Rachel. The truth of the whole business is, the mother has two or three dead teeth in her mouth and evidences of pyorrhea, and she, too, is not in the best of physical health and is a little picayunish about her eating. Upon questioning, we find that she and the older members of the family were eating at the table at the same time Rachel was present, and the older members eating any and everything they wanted at any and all times of the day, but insisted that Rachel must not eat this or that, but should eat thus and so.

If we expect the child to eat the proper food, and like it, then we should adjust our diet to suit this new condition, and do the same thing and brag about it and like it, and the child will follow our example. It is a mistaken idea that the child does not notice the difference between our teaching and our practice.

It has been figured out and we know just how much calcium and phosphorus is needed daily for a growing child, for an adult, and for the expectant mother. We also know that there is more available lime (or

calcium) in dairy products than in other sources, and there is an abundance in green leafy vegetables. Yet, when the daily ration is evaluated for minerals, we find that in what is considered the best regulated of homes the diet is inadequate in these tooth- and bone-building materials.

It seems almost like slander to say that some people use better judgment in the feeding of their hogs, chickens, and cows than they do in feeding their children, and they know more about "growing mash" for your chickens and what it should contain than they do about the necessary foods to build good teeth. This should not be, and it is the purpose of your State Board of Health to teach the child in our schools a few of the fundamental things about foods, food values, and proper health habits, and to teach oral hygiene through demonstration. If we can reach the child and make our teaching acceptable and educationally sound, we feel confident of eventually reaching the mother, even though we have to wait for a new generation.

This may seem an old story to some of you, for we have told it so many, many times. We expect to tell it again and again, because it is through repetition that we learn.

Won't you examine your child's mouth, and if he or she is in need of dental attention, consult your dentist immediately? If your children are not eating foods that supply tooth and bone-building material, won't you see that they do? Won't you look at your mouth and see if you need dental attention, and if you do, consult your dentist about your own mouth? If you are not having the right kind of food in your diet, it would be well to look after this also.

The Dental Division of your State Board of Health is anxious to improve mouth health conditions.

A total of sixteen hundred and fifty-two North Carolina citizens died of cancer during the year 1932. The question now is how many such deaths may be prevented in 1934.

North Carolina Turns Over a New Leaf In Public Health

By M. B. CHEATHAM

CALL it a New Deal or say that North Carolina is turning over a new leaf in public health, or call it what you will, but at any rate public health work in the State is making the greatest strides it has done for many a year. The State Board of Health is pushing a program to use Federal relief funds for sanitary projects extending from Murphy to Manteo. Malarial swamps are being drained, thousands of privies are being constructed or repaired, school and dairy sanitation are being improved, and new water and sewerage plants are being built in various parts of the State.

Towns, counties, and individuals are giving the sanitary program enthusiastic coöperation—and rightly—because everyone stands to gain and no one to lose by it. Improved health conditions will of course benefit the whole community as well as the individual on whose property the improvement is made. The individual or the community is getting necessary or desirable work done at the cost of only materials and incidentals, with labor and expert supervision furnished free. The neediest cases in each community coöperating will be taken from the relief rolls and made wage earners, and the money they make will be spent with the butcher and the baker, and if no longer with the candlestick-maker, at least with every other kind of tradesman or professional man in the community.

The plan, briefly, is this: The State Board of Health will furnish from its own staff trained sanitary engineers who will supervise the work; labor, to be recruited as far as possible from local relief and reëmployment rolls, will be paid for from Federal relief funds allocated to the C.W.A., leaving only the cost of materials and

incidentals to be paid for by the householder or community. Larger projects, such as swamp drainage or the construction of water or sewage plants, may be financed through the Public Works Administration, which makes an outright grant of 30 per cent of the cost of labor and materials, and loans the balance at 4 per cent, instead of the usual 6 per cent interest which such loans usually carry. By this method of financing the town saves at the very outset one-fourth the total cost of the project (30 per cent of labor and material costs amounting to approximately 25 per cent of the total cost), and further savings become evident each year of the amortization period as a result of the low interest rate charged. Smaller projects, such as privy construction, are handled through Civil Works Administration assistance providing for the cost of labor.

The State Board of Health hopes to carry out malarial control projects in about thirty counties and privy construction projects in all the State's one hundred counties. Work has already gotten under way in several counties, and additional counties are rapidly swinging into line. Figures tabulated November 15 showed 13 municipal waterworks and sewerage projects in the State already approved by the P.W.A., while preliminary work for 31 additional similar projects was under way towards getting the applications approved. Other applications have been made since, but at the time this issue of THE BULLETIN went to press later figures for the whole State were not available.

Before beginning privy construction work on a State-wide scale, the State Board of Health sanitary engineers made a series of careful experiments to determine the most economical and at the same time most ef-

fective method of securing perfection of details.

In order to use Federal relief funds on private property, such work must be shown to be clearly in the public interest. For this reason coöperation of all property owners is necessary. To repair one privy while those around it are left insanitary would be of doubtful public value, but to make all privies in a community sanitary would obviously be of value to the community.

For the privy construction work and the malarial control projects the State is divided into five main districts, with subdivisions of from five to ten counties each. Each district is under the supervision of a staff sanitary supervisor of the State Board of Health. Labor is to be recruited locally from relief or reëmployment rolls. Local supervisors will be, so far as possible, trained sanitarians recommended by the local relief administration and approved by the North Carolina Emergency Relief Administration. The State Board of Health is not handing out jobs; its function is the training and supervising of local personnel.

The plan of procedure is to organ-

ize work in one community of each district under a State supervisor, and as soon as it is in successful operation to call in other prospective local supervisors from adjoining counties for a training course, after which they will return to their respective communities to organize work along similar lines. Local supervisors are required to hand in daily and weekly reports of the work done to the State Board of Health.

P.W.A. loans amounting to more than two million dollars for sanitary projects in the State have already been approved, according to an announcement released November 26 by Dr. H. G. Baity of Chapel Hill, State engineer for the P.W.A. Halifax and Davidson counties and the Waccamaw district sought loans for drainage work amounting to \$156,234. Loans totalling close to two million dollars for water and sewerage plants have been made to Durham, Granite Falls, Southern Pines, Siler City, Columbia, Carolina Beach, Reidsville, Fayetteville, Charlotte, Randleman, Franklin, Gibsonville, and Winston-Salem. Other towns had made applications which had not been approved at the time these figures were released.

Amoebic Dysentery

By J. C. Knox, M.D., Asst. Epidemiologist, North Carolina State Board of Health

IN the July issue of THE HEALTH BULLETIN attention was called to the dangers of outbreaks of disease resulting from attendance at the World's Fair in Chicago. This warning was specifically against typhoid fever and smallpox. Recently the State Board of Health was notified by the U. S. Public Health Service that there had occurred in Chicago an outbreak of amoebic dysentery, resulting in 185 cases of the disease and 19 deaths, all told, and in the finding of 193 carriers of *endamoeba histolytica* among the food handlers in that city. These patients lived in all parts of the United States and Canada and are not confined to Chicago or vicinity. The U. S. Public Health Service

also asked that the various boards of health, both State and local, should be on the alert for cases of this disease, especially with the purpose of locating any case with source of infection traceable to Chicago.

Citizens of this State who visited the World's Fair should seek medical advice as early as possible upon the development of dysentery, even though mild, for only by thorough laboratory examinations of a fresh stool can the accurate diagnosis of amoebic dysentery be made. There is a tendency for recurrent attacks, any of which may be very severe.

CAUSE. Amoebic dysentery is caused by a unicellular parasite of the protozoa class; in other words, it

is a one-celled animal. It is capable of independent motion by changing its shape to throw an armlike projection, pulling itself along in this manner. This organism has been found chiefly in the tropical and sub-tropical areas; however, there is probably a greater incidence in our northern climates than we have been aware of. A few of the physicians in North Carolina have been finding this disease in this State for a number of years, which leads us to believe that if it were more closely looked for we would find a greater prevalence in North Carolina.

SOURCE OF INFECTION. Probably the greatest source of infection is from the intestinal discharges from a carrier of the disease. Unless the organism is in the encysted or non-motile form it is not able to cause the disease in another person. Uncooked foods seem to be a great source of the infection, if handled by such a carrier. The hands are contaminated while at stool and the non-motile form of the organism is transferred to the foods that are eaten raw, while such foods are in the process of preparation. The disease is, therefore, chiefly limited to family outbreaks, especially if the mother is the carrier. It was determined in Chicago that the present outbreak was due to food handlers who were carriers of the organism. Water may also be a source of the disease. The interval between exposure and development of symptoms may be a matter of days or weeks.

PATHOLOGY. In man the large intestine is the chief site of involvement. The majority of the cases run a chronic course with intermittent diarrhea or dysentery of varying intensity, but at any time in such cases the exacerbation may be very serious. In the recent outbreak in which death followed, many of the cases were undiagnosed, for it simulated appendicitis or other acute surgical conditions in the abdomen. Intestinal hemorrhage or perforation of the bowel, with a resultant peritonitis either localized or general, may be

encountered. Abscesses of the liver occur frequently.

SYMPTOMS. The onset may be mild or severe. In the acute attacks the onset is usually sudden, with a severe pain in the abdomen and a desire to defecate. Vomiting and nausea may occur. The diarrhea is serious. Fifteen to forty stools may occur within the twenty-four hours, first with mucus, later containing blood and shreds of intestinal mucosæ. There is usually very little fever present. This condition may clear up after three or four days and become more chronic, or any of the above-named complications may occur. Many cases are thought to be appendicitis, due to the intense pain in the appendiceal area, for the large bowel at that point is oftentimes quite extensively involved. There may be a chronic infection with the organism and the patient not be aware of it.

DIAGNOSIS. The diagnosis of the disease is only made by laboratory examination of the stool and finding the amœba in the motile form; however, the reports on several of the cases that have died recently from the Chicago outbreak show that the amœba was not found in the stool and the diagnosis was made only at autopsy. A trained eye can pick up the amœba very quickly, if present, but some practice is necessary.

As soon as the diagnosis is made, active and vigorous treatment should be instituted by a physician. If the treatment is begun early, recovery usually takes place rapidly, even in the severe attacks.

After recovery has taken place one should have frequent examinations of the stool to determine if the amœba is present in its encysted form. One who develops into the carrier stage is a source of danger to the immediate family or to anyone eating food prepared by this individual. Such a carrier should not be allowed to engage in the handling or preparation of foods for public consumption. Personal hygiene is of paramount importance.

Physicians and the local health departments should inform the State Board of Health of all cases of amœbic dysentery in their immediate

vicinity. If dysentery should occur in anyone who has recently visited Chicago, he should consult his physician for a microscopic examination.

Ignorance More Malignant Than Cancer

CANCER IS CURABLE!

North Carolinians on Saturday were given assurance of that from one of the greatest authorities in the world on the dread malady, Dr. Joseph C. Bloodgood, professor of clinical surgery and director of the Garvin Experimental Laboratory in Johns Hopkins University, who spoke at Wake Forest to 200 physicians and dentists of North Carolina.

Cancer is curable, but there is an important condition attached to this promise. Cancer is curable "if we could get the correctly informed patient to the correctly informed and equipped physician and dentist" in the early stages of the disease.

In other words, the greatest obstacle to the cure of cancer today is not the lack of scientific knowledge as to how to treat the disease, but the ignorance of the sufferer and the ignorance of the physician. Granted the conjunction of an intelligent and informed patient and an intelligent and properly equipped physician, cancer, if discovered in time, may be cured, while cancer of the skin, the mouth, and the cervix may be prevented altogether.

In view of these facts it is a remarkable commentary upon the State of North Carolina, where every year thousands die of cancer, that there is not, it was stated, one institution equipped for the treatment of all kinds of cancer. This in itself is evidence that in North Carolina there is lacking that informed mind in both patient and doctor which Dr. Bloodgood makes almost as much a specific for the cure of cancer as salvarsan is for syphilis or quinine for malaria.

The North Carolina State Medical Association is leading in a tremendous work in launching a five-year cancer control program in this State. Wisely, too, the association is begin-

ning its program with the education of the doctors themselves. The more difficult task of creating an informed public will follow gradually but steadily.

North Carolina's problem in fighting cancer, as in many other problems, is one of ignorance. Cancer is curable, but it will not be cured until that even more malignant disease, ignorance, is wiped out both among the illiterate and the educated. Sometimes ignorance walks under a college degree, and occasionally the unlettered are less ignorant. In cancer, as in childbirth, two problems of education are of almost equal importance: insistence upon not only the qualifying, but also the continuing education of the doctors, and an equal insistence upon the necessarily more gradual education of the people in matters of personal as well as public health.—*News and Observer*.

SUGGESTED NEW YEAR RESOLUTIONS

By M. B. C.

Things which can be done once and for all and not hang over you for the other 364 days in the year:

1. To have my child vaccinated against typhoid fever, diphtheria, and smallpox immediately.

2. To have my child given a thorough physical examination by a competent physician, and to have any defects of eyes, teeth, tonsils, etc., corrected immediately.

3. To have myself given a thorough physical examination if I have not had one in the past year, and to have all defects corrected.

4. To write today to the State Board of Health for that free literature which you need and which you have been putting off writing for.



The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD OF HEALTH

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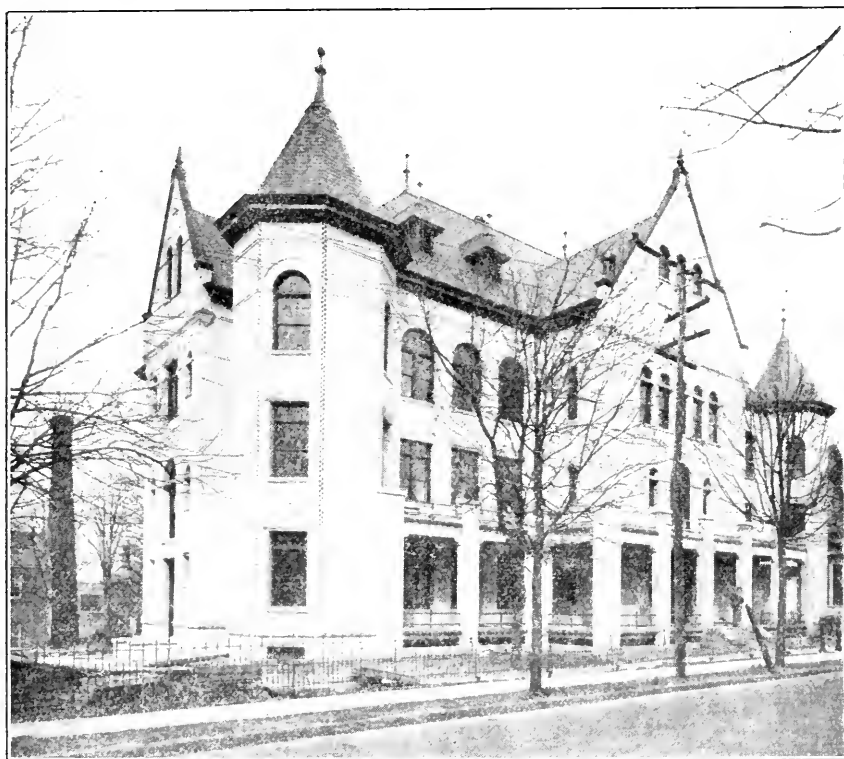
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Readers of THE BULLETIN are again invited to visit the offices of the State Board of Health at any time while in Raleigh. School teachers accompanying children to Raleigh should include the Health Department in their list of places to be visited.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	Health Education	Scarlet Fever
Cancer	Hookworm Disease	Smallpox
Constipation	Infantile Paralysis	Teeth
Chickenpox	Influenza	Tuberculosis
Diabetes	Malaria	Tuberculosis Placards
Diphtheria	Measles	Typhoid Fever
Don't Spit Placards	Pellagra	Typhoid Placards
Eyes	Residential Sewage	Venereal Diseases
Flies	Disposal Plants	Water Supplies
Fly Placards	Sanitary Privies	Whooping Cough
German Measles		

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)	Baby's Daily Time Cards: Under 5 months;
"Our Babies"	5 to 6 months; 7, 8, and 9 months; 10,
Prenatal Letters (series of nine	11, and 12 months; 1 year to 19 months;
monthly letters)	19 months to 2 years.
Minimum Standards of Prenatal Care	Diet List: 9 to 12 months; 12 to 15
Breast Feeding	months; 15 to 24 months; 2 to 3
Infant Care. The Prevention of	years; 3 to 6 years.
Infantile Diarrhea	Instructions for North Carolina Midwives.
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Notes and Comment

THE month of February has two points of significant interest for at least two classes of people of North Carolina. One is Saint Valentine's Day, which interests the young folks; the other is Garden Planting Month, which is a responsibility of the householders of the rural districts of the State, or certainly for the southern half of the State. The old-time farmer and gardener of North Carolina looked upon any neighbor who failed to begin his garden planting in the month of February as not living up to the traditions of a tiller of the soil.

For our State it is very probable that in no year since 1865 has it been more important for the people to begin early and to continue every day throughout the year to plan and cultivate just as many of the food crops as it is possible to raise. The cultivation should be thorough and intensive and should cover every available plat in the State capable of producing vegetables and other food crops. The expenditures of the National Government at the rate it has been going for the last few months cannot continue forever. Prosperity may be here by December, nobody may be without a job, cotton and tobacco may sell at a high price, the crops may be bountiful; if so, no harm will have been done. On the other hand, jobs may be harder to secure than ever before, money may be scarcer, cash crops may sell for less; but food which is raised and saved will be capable of saving life and preventing hunger for all the population.

Such diseases as pellagra and such conditions as malnutrition among children can be entirely prevented by proper attention to the production and

distribution of the food crops which can be raised anywhere in this State. From the standpoint of health, happiness, and prosperity nothing could be more important than attention to this matter by all our people.

* * *

SOMETIME ago Senator J. W. Bailey had a very interesting article in some of the daily papers under the general title of "What Is the Matter With North Carolina?" In the course of his article Senator Bailey mentioned the fact that North Carolina could easily care for a population of five million or more, provided the industrial and agricultural population were properly balanced and foreign markets for surplus products developed so as to assure a productive occupation for every individual constituting such a population.

On the same date in which Senator Bailey's article appeared in the papers a dispatch from Japan was published in one of the New York papers. The Japanese article was confined largely to a discussion of the rapidly increasing population of Japan, the rate of increase being placed at between 400,000 and 500,000 a year. In fact, last year the increase was more than a million. The population of that country on October 1 was placed at more than 66,000,000.

The average Japanese farm is 2.7 acres in extent and supports an average family of six people. The statement was made that Japan is more crowded than any other country in the world, being nearly three times as thickly populated as Belgium. The reader can understand something of

the crowded condition by comparing the country of Japan with the State of California, which has only five and a half million people. But California has twice the land area of Japan.

They have an Oriental birth rate of nearly 33 per 1,000 live births, which is a great deal higher than the American birth rate, and almost twice as high as the European birth rate. Japan, it will be noted, has a death rate nearly as low as the United States. It is said that the birth rate in Japan is falling a little, due to the fact that marriages are fewer and that their rising standard of living means later marriages.

The writer in the New York paper goes on to explain that, so far, the Japanese have dealt with this problem successfully by extending their economic frontier. Their cheap goods have found markets abroad by underselling any other country. The writer states that the Japanese are disciplined, but not a docile people. Ninety-seven per cent of them can read and write, and they are great readers. It is said that the number of students at technical schools and colleges is enormous.

In an article in THE HEALTH BULLETIN more than fifteen years ago we pointed out that Japan was one of the first countries in the world, following Germany, to institute a complete system of medical inspection of all school children. Corrective treatment and preventive measures have followed throughout all this period. For almost fifty years they have kept up their scientific methods of preventing disease and of rearing a healthy population. It is probable that no country in the world is any nearer physical perfection than the Japanese. Their scientists rank with the best of the world. Having an imperialistic, centralized government, they are in a position to enforce to the last letter their nationalistic program. The emphasis has been placed on physical perfection and literary excellence. It is doubtful that any other country in the world can successfully claim 97 per cent of the population to be able to read and write.

When we compare our own sporadic methods of medical inspection of schools, our own neglect of the physical and mental development of the masses of our people, and the methods followed in Japan, we cannot help but wonder at the tremendous significance of that country in the world affairs today. If we could only put a little of our excess energy and surplus money into a comprehensive system of organized health activity with disease prevention and the promotion of physical and mental health for every child in the remote sections of this State, it would not be long before North Carolina could compare favorably with Japan in this respect.

* * *

IN a recent issue of the *New York Times*, under the general subject of "The Week in Science," written by Waldemar Kaempffert, appears an interesting article from Italy. This article may be of considerable interest to some of our people who have to deal with the mosquito problem for several months in the year. In reading the item describing the experiment in Italy, it should be borne in mind that the people in most European countries live in much closer contact with their animals than do our people. Multitudes of families in countries of Europe occupy the second floor of their home, and their pigs and cattle and poultry and so on are housed on the first floor, directly underneath the family quarters.

If animals, such as hogs, are to divert the attacks of mosquitoes from members of the family in heavily infested areas, it is evident that the animals must be very close to the house, which might or might not be for the best interest of the general health of the household. If thorough screening and other methods of protection against mosquitoes can be carried out at all times, we should much prefer to have the animals' quarters a long distance from the house. In procuring protection from mosquitoes, the housefly pest might be increased, and therefore one evil would be exchanged for another. Another consideration is

that mosquitoes in Italy are in some instances of a different type from the mosquitoes in eastern North Carolina. The article, however, is very interesting, and we quote as follows:

PIGS DECOY MOSQUITOES

An Experiment That Reduced the Number of Malaria Cases

Amid the Etruscan ruins of Ardea lies a little Italian village with a population of 513. Mosquitoes of the malaria-bearing *Anopheles* variety swarmed there. Despite all preventive measures the cases of malaria rose from 23.6 per cent in 1929 to 46.9 in 1930 and fell to 32.6 in 1931.

When the public health authorities inspected the village in 1931 they gave orders to install twenty hog-pens. Before that there had been only two, besides three stables for cattle. The effect was almost miraculous.

Dr. Escalar, who saved the village from much scratching and illness, states that the number of *Anopheles* mosquitoes in houses dropped 60 per cent in 1932. He caught 139 *Anopheles* gorged with blood, but the blood of 97 was hog blood. Not one of the rest contained human blood. Between May and December, 1931, there were 87 cases of malaria in Ardea, but in the same period of 1932 only 38. The cases of malaria dropped from 46.7 per cent in 1930 to 32.6 in 1931, and to 8.94 in 1932, after the hog-pens were installed.

'Damaged Lives': A New Motion Picture

By EVART G. ROUTZAN, in *Journal of American Public Health Association*

DAMAGED LIVES: A NEW MOTION PICTURE. The new picture was introduced to public health workers during the A. P. H. A. meeting in Indianapolis. Says *Journal of Social Hygiene*:

After careful consideration, and study of opinions received from several hundred physicians, health and governmental officials, social workers, nurses, and representatives of religious, educational, and other organizations, the executive committee of the American Social Hygiene Association has agreed to endorse the motion-picture drama, "Damaged Lives," recently produced by Weldon Pictures Corporation and dealing with the subject of syphilis. The film, with a supplementary medical lecture film, is expected to be shown in selected representative theatres throughout the United States, the premier showing being at the Majestic Theatre in Boston, on September 15, with the coöperation of the Massachusetts Society for Social Hygiene, the Massachusetts State Department of Health, and other state and city agencies.

This represents the first union of forces between recognized health agencies and commercial producers in the United States in an attempt to combine the technic of sound motion-picture photography with authoritative

health information for showings in commercial motion-picture theatres for paid admissions. In the opinion of competent medical and educational authorities, this union will have far-reaching and important results in adult mass education.

The production is the culmination of five years of study by motion-picture producers, in coöperation particularly with the Canadian Social Hygiene Council and with the American Social Hygiene Association, regarding preparation of a modern talking-picture drama which might be a worthy successor to Brioux's "Damaged Goods," produced twenty years ago on stage and screen, and the association's silent drama films, "The End of the Road," which was shown throughout the United States shortly after the World War in connection with the Government's campaign against venereal diseases. Competent critics of all three productions consider "Damaged Lives" by far the most potentially effective in its educational possibilities. It is an appealing human story, produced with extraordinary good taste, is well cast, well acted, and well photographed.

The first public showing in the United States, held in Boston, was presided over by the State Commissioner of Health, with speakers representing the Boston Health Department, the

dramatic editors of the city, and other groups. There was a distinguished group of patrons and patronesses. It would seem that other cities might make a significant event of the local

showing of the picture. See *Journal of Social Hygiene* for additional information, and address inquiries to American Social Hygiene Association, 450 Seventh Avenue, New York.

Pure Food and Drugs

IN its issue of December 20 the *Biblical Recorder* published an editorial in support of the bill now before Congress designed to correct some of the evils existing in the food, drug, and cosmetic trade in the United States. The *Biblical Recorder* is the organ of the Baptist Church in North Carolina. It is one of the ablest edited church papers in the country, and it is pleasing to the editors of THE HEALTH BULLETIN to see such papers representing the religious press take an open stand opposing the abuses now carried on in trade circles exploiting the people in numerous ways.

Some thirty years ago, when the so-called patent medicine industry became such a stench in the nostrils of decent people throughout the country that there occurred a popular uprising against the methods then practiced, one of the serious obstacles was the advertising columns of the church papers. With very few exceptions the religious journals of that period held their advertising columns just as wide open to the advertisements of patent medicine nostrums as did the secular press. It is pleasing today to record the fact that very few, if any, religious papers in the country of reputable standing carry such advertising at all.

The Tugwell Bill, which will probably be amended so that its friends will scarcely recognize it before it passes Congress, or, what is more probable, a substitute bill will take its place which will be agreeable to the manufacturers and the national advertising agencies living off the food, drug, and cosmetic trade, is an attempt to eliminate the more abusive practices which now exist. One of the chief features is what is known as the Open Formula; that is, the requirement that the formula of each adver-

tised product shall appear on the label, on the package, and in the advertising matter. It is a question of simple honesty. It provides that the purchaser may know what he is buying. The very fact that this feature is so bitterly assailed is the greater evidence that it meets the issue squarely. If the purchaser of any food, drug, or cosmetic knows exactly what he is buying, there is no mystery about the transaction, and any product must stand or fall on its merits. Could anything be fairer?

If the product has merit and is sold at a reasonable price, it should and could be advertised all over the earth, and its success could and would be assured. The answer comes back that competitors would undersell. In these days of codes and trade regulations this is not probable. The same accusation could be brought against the manufacturers of automobiles. The purchaser of an automobile knows definitely what he is buying. The manufacturers advertise the facts to the world, and yet there is no lack of a supply of desirable cars and no lack of automobile manufacturers in the millionaire class.

A simple example of this fact may be noted by any resident, at least of Raleigh or Greensboro, and probably other towns in the State. For several months the purveyors of a simple saline have been renting a separate store in Raleigh and one in Greensboro, and with attractive advertising matter and a catchy name have been pulling in suckers at an amazing rate. The specialty in this line is a bottle of stuff which sells for \$1.50. The chief ingredient which the producers would be compelled to put on the bottle label if the Tugwell Bill were to pass consists of about 5 cents worth

of Glauber's salt. There is a trace of Epsom salts, which is still cheaper; and also a trace of common old table salt, which may be bought for still less. Altogether the cost of the product, including bottle and label and stopper and package, could not possibly be more than 10 cents. Yet the sucker is led to pay his \$1.50 in good money for this concoction, which few of them would do if they knew they were simply buying 5 cents worth of Glauber's salt for \$1.50.

If it were not for the mystery concerning most of these products and emphasized in the advertising matter, the whole trade would fall flat. The profit made from the manufacture and sale of questionable products, either of food, drugs, or cosmetics, does not go altogether to the wholesale and retail dealers nor to the manufacturers, but it goes to the national advertising agencies and the newspapers of the country who carry such advertising. In other words, the sole power inherent in such a product is not contained in the products themselves, but in the advertising attractions. Suckers can be hooked through an attractive advertisement who could not be reached in any other way. The success of the patent medicine business—its continued success—is a standing testimonial to the value of printers' ink in the form of attractive advertising.

The editor of the *Biblical Recorder* concludes his editorial with the following pertinent sentences:

"Patent medicine manufacturers are heavy advertisers and hope to bring pressure to bear on the periodicals in which they have been carrying advertisements. But the probabilities are that the new bill will be drastic enough and will be enacted into law. It is promoted by Assistant Secretary of Agriculture Tugwell, who has made speeches over the radio in support of it. We need a law that will prevent the abuses of which Mr. Tugwell has been telling over the radio and of which Mr. Mitchell has written."

In an editorial appearing in the *Raleigh News and Observer* of December 30, under the heading "Guard the Inner Man," the editor says:

"No other legislation before the Congress which convenes next week will be so important to Mr. and Mrs. John Citizen and the little Citizens in their private lives as that which will undertake to bring the regulation of food and drugs up to date. . . .

"One of the best features of all the proposed legislation is that which will require a new and greater responsibility for misleading advertisements of foods or drugs. If advertising has the virtue which its venders claim for it—and the available evidence indicates that it has—then a misleading advertisement in a newspaper, magazine, or radio broadcast is far more dangerous to the public than a misleading label on a box or a bottle."

In the second paragraph just quoted from *The News and Observer* the editor emphasized in a few words the evils we have been trying to point out in this article. In short, a misleading advertisement, as the editor of *The News and Observer* states, is far more dangerous to the public than even a misleading label on the package or on the bottle.

DEATHS IN 1933

Typhoid Deaths Fewer, But More Diphtheria Deaths

We are pleased to announce that the provisional reports of deaths occurring in North Carolina for 1933 record fewer deaths from typhoid fever than in any year in the history of the State. There has also been no death from smallpox in this State in two years. This is another remarkable record. Both diseases are preventable, and this record indicates that preventive agencies have been alert. In other respects, the picture is less encouraging. There was a slight increase in deaths of babies under two years of age caused by diarrhea and enteritis, although the general death rate for infants under one year will probably be no higher than in 1932. There was an increase in the deaths from puerperal septicemia, and, finally, there was an increase in deaths from diphtheria. It is well to record here that the usual activities in immunizing against diphtheria were not carried out in 1933 by the State Board of Health because of a lack of funds.

"Sunshine"

By J. C. KNOX, M.D.

RECENTLY several newspapers have been calling our attention to the lack of availability of electric power to the masses of people in rural communities. This power is considered one of our natural resources which belongs primarily to the citizens of the State, and as such should be readily available to all of its inhabitants. It is hoped that through this agitation electricity will soon find its way to those communities and at such rates as not to prohibit its use. "Back to the farm" movement will receive added impetus if the rural homes can be provided with the luxuries that come with use of electricity. There are other natural resources that should be protected and set aside for use of the people of the State. State-owned, protected, and supervised forests located in the various typical geological divisions of the State should receive serious consideration. Also, these areas could serve as game refuges. The necessity for protection of native wild animal life will eventually force itself upon us.

The toast often given to North Carolina is:

"Here's to the land of the long-leaf pine,

The summer land, where the sun doth shine;

Where the weak grow strong, and the strong grow great—

Here's to 'down home,' the Old North State."

This toast brings to mind another great resource which necessitates no expenditure of money for bringing it to each individual in sufficient quantities to be of great value. Sunshine—we have it with us much of the time. There is no need for newspapers to espouse its conservation. Greater use of sunshine by the people of the State is a thing to be desired, for there are properties in the various rays that are of considerable benefit to man. The deficiency disease, rickets, is quite commonly found in this State among the infants and young children. There

is a failure of proper utilization of the mineral calcium, which may or may not be present in sufficient quantities in the child's diet. If calcium is present in the food in adequate amounts there is a faulty mechanism in deposition of these salts in the bones. They fail to harden as they should, thereby resulting in unsightly deformities, such as bowed legs, odd shaped heads, and sometimes crooked chests and spines. Of course, if the necessary calcium is absent from the diet, then the results are the same as above stated. Cod-liver oil is given for this condition, and when it is administered in proper amounts, when the diet contains the necessary calcium, the condition is cured. An adequate diet given in conjunction with suitable amounts of cod-liver oil prevents rickets from developing. Ultra-violet rays, either artificial or natural, such as found in sunlight, are beneficial in aiding either the prevention or cure of rickets. Unfiltered sunlight in direct contact with the body exerts its beneficial effects. Ordinary windowpanes act as filters to the ultra-violet rays. Special glass or screens which allow these rays to pass through have not turned out to be of much practical value. Smoky or dust-laden atmosphere also acts as a filter for sunshine. Sunshine is of less value in winter. Exposure to its rays at this time should be between the hours of 10 a.m. and 3 p.m. In summer, exposure to sunshine may cause blistering of the skin. Caution should be exercised when exposing infants to summer rays. Avoid exposure during the middle of the day; before 9 a.m. and after 4 p.m. is usually sufficient.

Sunlight is also beneficial in the prevention and cure of tuberculosis. Sunlight has a very decided germicidal power. Few disease-producing germs can resist the exposure to direct sunlight for any length of time. Our careful attention should be given to a more general use of the many natural resources within our borders.

A Baby Flies From Texas To Baltimore

A DAY or two after Christmas all the world was thrilled by newspaper headlines describing the flight of a famous aviator from Houston, Texas, to Baltimore. His trip was made mostly at night, landing on a snow-covered field at 2 o'clock in the morning. The trip was a dangerous one, made not only at night, but in the face of a very cold wind. The trip was a sensational one because his chief passenger was a five-months-old baby girl being taken to a Baltimore doctor for a brain operation. The baby's parents, nurse, an uncle, and even a grandmother, all went along. Could any baby's adventure be more spectacular? A fourteen-hundred-mile trip with its family at night in stormy weather to consult a doctor in Baltimore! The parents and the aviator thought they were in a race with death, and they probably were. It is earnestly hoped that the treatment provided by the Baltimore specialist saved the life of the baby and that she will grow up to happy womanhood and be a joy to her parents forever.

The writer of these lines would not minimize the importance of the trip of the Texas baby. On the other hand, the love of the parents, the courage and ability of the pilot of the airplane, and the quiet skill of the physician, skill obtained through long years of work and study, all should be awarded the highest praise and admiration. But the writer has been for many long years troubled about the loss of thousands of lives of babies in North Carolina, a very large percentage of which could very easily have been prevented. These infant deaths might nearly all be prevented without the necessity of long trips in airplanes to distant specialists. So, on reading the headlines about the strenuous efforts to save the life of the Texas baby, the writer's mind

instantly visualized the situation in North Carolina.

During the first eleven months of 1933 a total of 4,539 infants under one year of age died in our State. The newspapers reported that it took about eleven hours for the airplane to travel from Houston to Baltimore. At the rate our babies were dying in the first eleven months, about six North Carolina babies of the same tender age as the little Texas passenger died during the eleven hours the plane was traveling from Texas to Baltimore. At least five of our babies could have been saved if their parents had made use of the knowledge available now to every parent about the care and protection of babies. The great killers of our babies—faulty feeding habits, infectious and communicable diseases—could all be prevented. A postal card to the State Board of Health at Raleigh has brought information to the mother of many a baby during the last few years which has enabled her to better protect her babies. Many little lives have been saved who would otherwise have perished. Their homes are scattered all over the remote sections of this rural State all the way from Knott's Island to Culberson. Most of them live miles from the nearest physician.

The prevention of infant deaths requires primarily two things on the part of the babies' parents: First, information; second, the determination to intelligently apply that information in the care of their baby. In theory simple enough. In practice difficult because it requires self-denial, industry, and intelligence, attributes all parents do not yet possess. Information on infant care is available free of charge to every mother in North Carolina who will spend a penny for a postal card and take the trouble to write to the State Board of Health for it.

First Aid To Save Life: Organized Common Sense

By MARY CHEATHAM

TO die or not to die often depends on a knowledge of first aid. An accident happens—a cut artery; a child swallows poison; a gas jet leaks—asphyxiation; or a swimmer goes under the third time. A delay of even a few moments means death. Such occurrences are common, but how many people know what to do to prevent death during that fatal interval until the doctor comes? Do you, or you, or you? The life of a loved one may depend on your knowledge.

The ironic thing about first aid is that we need it when we least expect to, and when the accident happens we have neither the time nor the means available to sit down then and study what to do. Everyone should take the responsibility of learning at least those fundamental principles of first aid on which life itself may depend. First aid is not at all hard to learn; in fact, it is largely a matter of organized common sense. If the patient has stopped breathing, you make him breathe; if he is bleeding dangerously, you check the bleeding; if he has swallowed poison, you get it out of his system. It sounds simple, and is simple, but would you think of it in the emergency unless your attention had been called to it in calmer moments?

Certain general rules should be followed in all accidents. The first rule in any emergency is to keep your head and keep calm. Nothing is ever so bad but panic makes it worse. To assure keeping your head, the best way is to know in advance exactly what to do in such a situation. Keep the patient calm, and keep the crowd back so the patient can get air. Call the doctor at once if the injury is at all serious, but do not wait for him to arrive. Observe absolute clean-

liness both in your own hands and in all dressing used on open wounds. Remember that a dirty or unsterilized dressing may be worse than none. In the treatment itself, notice first breathing, severe bleeding and shock, all to be discussed below. Let everything else go until breathing is re-established and severe bleeding checked. If the injury is at all serious always have the patient lie down; if face is flushed, raise head slightly; if pale, lower head. If there is vomiting, turn the head to one side. Loosen any tight clothing such as corsets and collars, which may interfere with breathing. Make the patient as comfortable as possible with as little movement of the injured part as possible. To get at the injured part, if necessary cut clothing rather than move injured part in removing clothing. As a secondary consideration save the clothing as much as possible by cutting up seams where practical. If the patient must be moved, if the injury is at all serious, move him lying down. Improvised stretchers can be made by running poles through grain sacks, skirts, buttoning coats over poles, or using doors or gates. If you have no poles, roll the edges of skirts or blankets tightly to make a firm edge for carrying.

The use and abuse of stimulants should also be clearly understood, and is again largely a matter of common sense. Give stimulants when the patient is faint and when heart action needs stimulation. Never give the patient stimulants to swallow until he is conscious, or you will strangle him. Never give stimulants when the head has been injured, when the bleeding is profuse, or when the face is flushed and the pulse strong. The best common stimulants are hot black coffee and aromatic spirits of ammonia. Alcohol is not a good stimulant

because in the end it produces depression rather than stimulation.

Poison

But enough of theorizing; now for specific cases. Poisoning is one of the commonest accidents requiring immediate action to save life. In this more than in almost any class of accident, prevention is the best treatment. Do not keep poisons around the house unless absolutely necessary, and never, never leave them in reach of children. If you must have poisons in the home, have them clearly marked both to the eye and to touch. A good plan is to have adhesive tape, rubber bands, or other easily detected substances on the outside of the bottle and have it clearly labeled POISON. Never take medicines in the dark or without examining the bottle and knowing exactly what is in it.

But if in spite of all precautions someone still takes poison, act immediately. Call the doctor at once, telling him what poison has been taken, so that he can bring the proper antidote; but do not wait for him to come. Give the patient mucilaginous drinks, such as milk, raw eggs, salad oil, etc., to check the absorption of the poison into the body. Unless the patient's lips are burned by acid, give an emetic immediately to cause vomiting. Soapsuds, salt, mustard, or baking soda in lukewarm water are usually effective; but if they fail to cause vomiting, tickle the back of the patient's throat. Repeat, washing out the patient's stomach with several glasses of lukewarm water with soapsuds, soda, etc., until the stomach is completely emptied. Give a large dose of Epsom salts, and if the symptoms are present, treat for shock (described below). In carbolic-acid poisoning use soapsuds, or Epsom salts in water, to cause vomiting. If delirium threatens, dash cold water on the patient's face and head.

Shock

In treatment of poison and many other injuries one must frequently treat for shock, also. Shock, medically speaking, is a condition in

which all activities of the body are greatly depressed, resulting from injury or intense emotion. Symptoms of shock are cold, clammy skin, weak, rapid pulse, irregular or gasping breath, subnormal temperature. The patient may or may not be unconscious, but he appears stupid and dazed. Treatment for shock is rest, heat, and stimulants. Have the patient flat on his back with head low, cover warmly with blankets, and use hot-water bottles, being particularly careful not to burn him, as he is more easily burned at this time. When he is conscious, and if there is no bleeding, give stimulant. Call doctor if serious.

Resuscitation

Another very common class of accidents in which immediate action is necessary to save life are those in which the patient has stopped breathing. Always make reestablishing breathing the first consideration in such accidents. The Schaefer prone pressure method is usually considered the best method of artificial respiration, because it requires no equipment and one operator can do it for a long period of time without assistance. Remember every moment is precious. Remove any gum, tobacco, etc., from the patient's mouth and proceed as follows:

1. Lay patient flat on his stomach with arms extended overhead and bent at the elbow, with face turned outward. See that the nose and mouth are free for breathing.

2. Kneel, straddling the patient's thighs and facing his head. Place palms of hands on small of patient's back with fingers resting on ribs, little finger just touching the lowest rib.

3. With arms rigid swing slowly forward until the shoulders are directly over the heel of the hands with weight of the body on the wrists, making firm, steady pressure on the patient. Do not bend elbows. Hold the pressure while counting one, two, three. This forces the air out of the lungs.

4. Now snatch hands away quickly and swing back, removing pressure

completely while you count one, two. With the releasing of pressure the chest expands and draws in air.

5. Repeat, alternating pressure and release at the rate of about twelve or fifteen times a minute, the complete double movement taking about four or five seconds, approximately the normal rate of breathing.

6. Continue artificial respiration without interruption until the patient resumes normal breathing or until the doctor pronounces him dead. It may be necessary to work for four hours or longer.

7. If a second person is present, have him loosen patient's clothing, cover him warmly, and rub arms and legs to help circulation, but do not let this interfere with respiration. Keep the patient warm.

8. To avoid strain of the heart, keep the patient lying down even after he revives. When he is conscious, not before, give stimulants.

9. If possible do not move patient until he is breathing; but if he must be moved, continue respiration during the moving. If it is necessary to change operators, do it without breaking the rhythm of the breathing.

10. A brief recovery may be followed by a sudden lapse of breathing. So keep watch on the patient even after he is considered out of danger, and at the first sign of stopping breathing resume efforts again.

Gas Poisoning

Artificial respiration is necessary in drowning, gas poisoning, electric shock, strangulation, etc. Gas poisoning may result from leaking gas fixtures, poorly regulated gas or coal stoves, running automobile engine in closed garage, and other causes. In gas rescue, remove patient to fresh air immediately, send for the doctor, and give artificial respiration. Gas is lighter than air; therefore the air nearest the floor is purest. To rescue patient from gas-filled room, tie his hands together with a handkerchief, slip his arms around your neck, and crawl out on all-fours, dragging his unconscious body under your own.

Electric Shock

In electric shock the patient touches a live electric wire. Release patient from wire at once; he cannot release himself. Give artificial respiration, send for the doctor, treat burns, and if necessary treat for shock. In rescuing patient from wire remember that the body is a conductor, and touching the patient is like touching the wire itself. If the current cannot be shut off at once, before attempting rescue insulate yourself by wrapping your hands with several thicknesses of cloth, rubber, newspapers, etc., or by standing on dry boards, glass, rubber, or dry clothes. They must be dry, as anything wet acts as a conductor, and if you are not careful you will have to be rescued yourself.

Hemorrhage

Wounds with serious bleeding always require immediate action. How often have you read accounts where the patient bled to death before help arrived? Perhaps you think such accidents are too rare for you to bother learning about them. I thought so too, once—until my ninety-year-old grandmother, in her room sewing, apparently as harmless an occupation as you could wish, reached into her workbasket and accidentally stuck the scissors into her wrist, puncturing the principal artery there. She would have bled to death in a very few minutes if my brother had not known how to apply a tourniquet, using a handkerchief and a wooden golf tee in his pocket.

In all wounds there is the double danger of infection and hemorrhage or serious bleeding, either of which may be fatal. Serious bleeding should always be checked before anything else is done, as death or a seriously weakened condition results. Elevating the limb and applying slight pressure at the edge of the wound with the finger or dressing is usually sufficient to check bleeding, but for cut arteries or large veins special measures are necessary. If the blood comes in a steady flow, it means a cut vein; if in spurts, a cut artery. Arte-

rial bleeding is more serious because the heart is directly behind, pumping blood through the wound. To check bleeding apply pressure above a cut (between cut and heart) for an artery, and below the cut for a vein. To get the necessary pressure to stop bleeding, apply a tourniquet, a cloth, handkerchief, bandage, etc., tied around the limb and twisted tight. This, of course, can be used only for an arm or leg. Five points should be remembered about a tourniquet:

1. It must be long enough to tie around the limb.

2. There must be something to make pressure at the artery greater than on the rest of the limb: smooth stone, watch, darning ball, or tightly folded pad of gauze, etc.

3. This pad must be placed so that the cut artery lies between the pad and the bone so the pressure will close the artery between the two harder surfaces. For this one should know the general location of the blood vessels. Roughly speaking, the principal vessels in the arm run about like the inner seam of a coat sleeve, and in the leg about in line with the inner seam of a man's trousers.

4. Unless the tourniquet is tight enough it increases bleeding. In such cases remove the tourniquet. A short stick or handle should be inserted in the tourniquet and used to twist it tight. Rarely can one be twisted tight enough by hand alone.

5. Remember a tourniquet stops most circulation in the whole limb below the cut. For this reason it should not be left on too long or it may injure the rest of the limb. Usually it should not stay on more than an hour. If necessary loosen it for a while and tighten it later.

After bleeding is checked, if the patient is very weak, give a stimulant, but never give it until the bleeding has been checked, as a stimulant increases the heart action and consequently increases the flow of blood.

All wounds have danger of infection leading to death through blood poisoning or tetanus. Never neglect even small cuts. My earliest realiza-

tion of death came at the age of seven when a schoolmate died of blood poisoning from infection of a skinned knee. Infection may be caused by germs on the object inflicting the injury, from the patient's clothes, from the hands of the rescuer, from water used in washing, or unsterilized dressing used on the wound. To prevent infection do not wash, touch, or put anything into a serious wound unless a doctor cannot be found. If it must be cleaned before the doctor comes, use boiled water, or water and alcohol half and half. Unless there is need for immediate action, before dressing a wound, wash your hands thoroughly, using soap, water, and a nail brush. For minor cuts apply tincture of iodine or 2 per cent solution of Mercurochrome into and around the wound; apply a sterile dressing which may be gotten ready for use at any drug store and kept. In an emergency a freshly washed and ironed handkerchief or other freshly laundered cloth may be used. Remember an unsterilized dressing is worse than none. If any signs of infection develop in the next few days, call a doctor at once, and meanwhile put on hot compresses of normal salt solution.

There is danger of tetanus, or as it is commonly called lockjaw, especially when the wound is small and deep or when it is made by a dirty or rusty object. In such cases do not attempt to dress the wound yourself, but take the patient to the doctor for anti-tetanus treatment as soon as possible.

Burns and Fire in Clothing

Burns frequently cause death, especially where the patient's clothing catches fire. Where this happens, wrap the patient in the first thing at hand—rug, coat, blanket, etc.—wrapping at the neck first to prevent flames reaching face. Lay him on the floor, rolling him over and smothering the flames. If you have a chance to choose, woolen material is better than cotton, as it is less likely to catch fire. If the fire is in your own clothing, never run for help, as the

motion fans the flames more. Wrap yourself in the nearest thing at hand and smother the flames as before. If there is nothing at hand, roll over slowly and beat flames with your hands wrapped in parts of the clothing not burning. Such fires always cause serious burns, so send for the doctor at once. Allay pain until he comes by protecting burn from the air by a paste of baking soda and water. Gauze prepared with picric acid may be bought at the drug store and kept ready for emergencies. Remember that burns, like ordinary wounds, are subject to infection, so observe care in handling them. All burns except very minor ones should be treated by a doctor, but pain may be allayed until he comes. It may also be necessary to treat for shock.

Freezing

Freezing may be fatal, but in this climate it is less likely to be serious than the other accidents discussed here; but because of its seasonal character it can be appropriately treated at this time of the year.

Frostbite and freezing differ chiefly in intensity, and the amount of the body involved, but the treatment is largely the same. The frozen parts are an intense white without feeling or motion; the patient may or may not be unconscious. The important thing is to restore circulation gradually to the frozen parts. Sudden application of heat causes death of frozen parts. Have the patient in a cold room, rub him with rough cloths wrung out in cold water, or in severe cases with snow. Very, very gradually increase the temperature of the room and of the water used in rubbing. When the patient can swallow, give stimulants. When frozen parts become normal in color and the tissues are soft, showing that the circulation has been established, then wrap patient warmly and give hot drinks. In using hot-water bottles at this time, put them outside the blanket, as the patient is particularly liable to be burned.

Know what to do if an accident does happen. But the best treatment for accidents is to prevent them.

"They Say"

Public health authorities and reputable physicians are performing a worthwhile service by their warnings of the danger of quacks, patent medicines, and get-rich-quick specialists. These warnings cannot be given too often nor too loudly.

Man is a reasoning animal who forgets to reason when the situation most demands it. The trust and faith which the average person places in hearsay statements regarding patent medicine advertisements, get-rich-quick specialists, and others of their ilk is one of the paradoxes of human intelligence.

Than "they say" no two words when applied to the healing art do more damage. "They say" prescribes more medicine than all the doctors in the country; and, incidentally, kills more people.

"They say" that a certain old lady can remove warts by the pow-wow process; "they say" that this and the other is good for headaches; "they say" that the highly advertised medicine in the ornate package will cure twenty different diseases; "they say" that the widely advertised doctor can cure any disease in any stage. "They say" and "they say." And millions of otherwise sensible men and women, without asking other proof, look up the sorceress, patent medicine, or quack, and spend their money to be cured of a disease they never were afflicted with.

The wise person will seek for a more solid foundation for his health condition than "they say." When something goes wrong with his physiological machinery he will consult a thoroughly competent physician.—*Chatham News.*

Measles

By D. F. MILAM, M.D., Epidemiologist

MEASLES is one of the epidemic diseases that has its rise and peak in the first half of the calendar year, in contrast e.g. to diphtheria, which attains its peak in the fall. In the case of measles the peak month is usually February, March, or April; with the rise being well under way in January, and the course of the epidemic run through by the end of May. Here is then a very definite season of maximum prevalence for measles.

Furthermore, it is evident in every area of any considerable population that the waves of epidemics of measles are likely to be pretty well spaced out at intervals of from two to six years. In North Carolina the longer period seems to hold for the State as a whole; but it is always to be stated that for measles an area as large as the State of North Carolina is too great to be considered an epidemiologic unit. Rather, each county or each city would run its own course in this regard without any great influence from remote sections of the same state. However, the number of areas running to epidemics in the same year is so uniform that the figures for the State as a whole are very valuable as an indication of the trend and the probabilities as to impending outbreaks.

With these general points in mind, the following tabulation of reported cases of measles in North Carolina are of interest:

YEAR	CASES	YEAR	CASES
1920.....	3,621	1927.....	32,882
1921.....	11,539	1928.....	60,543
1922.....	2,042	1929.....	1,209
1923.....	52,066	1930.....	1,376
1924.....	34,938	1931.....	15,449
1925.....	1,002	1932.....	13,672
1926.....	7,952	1933.....	16,088

There was a five-year interval between the peak years of 1932 and 1928. This time last year a warning was sounded that a great outbreak of measles was imminent, but from the above tabulation it is very evident

that it did not materialize. We are, however, again calling attention to the probability of a great rise in measles incidence this spring, all the more imminent for its failure to materialize last year. The rise had apparently already begun in December. In that month 2,425 cases were reported, the largest for any December since 1927 and nearly double the five-year average for the month. With these facts in mind, we feel justified in again announcing an impending large outbreak of measles.

In the case of measles about 95 per cent of the population have an attack at some time during their life; the rest are either naturally immune, die too soon, or have it too light to seek medical advice and diagnosis. For practical purposes we can call it a universal disease. Now a few years of low incidence builds up a large group of young children who have not been exposed to measles and so have never had it. This group of non-immunes is the fuel on which the epidemic spreads. The greater the fuel the more extensive the conflagration. This is the situation we are confronted with now. Any community not having had a large outbreak of measles within the last two to five years should consider a large epidemic as imminent.

So much for prophecy. Now what's to be done about it? Much. It's worth recalling that in the epidemic years of 1923 and 1928 over five hundred children died of measles in each of these years. Most of these deaths were preventable. As a killer measles in North Carolina ranks ahead of scarlet fever, infantile paralysis, meningitis. But it need not be so fatal. One reason is that parents too frequently regard it as just a childhood disease that everybody has and for which no special care or attention is indicated. The facts are that if proper attention through careful nursing and medical care were given to all measles

patients this mortality would drop to insignificant proportions.

Every measles patient should be regarded as suffering from an acute illness and extreme care taken to prevent the onset of complications, particularly pneumonia, which carries off so many. Careful nursing is the answer, with careful medical supervision by doctor to watch for complications and take prompt measures if any appear. People are asleep to the dangers of blindness following measles, to deafness following scarlet fever, and the like. Fortunately, measles is usually a mild disease, but its possible complications when neglected should be always kept in mind.

The fatalities from measles are concentrated in the very young. Sixty per cent of the deaths are in children under five years. These are the ones who are incapable of taking care of themselves, and their deaths are largely traceable to carelessness or ignorance on the part of their parents. Not always, of course.

And this brings up the question of preventing measles in the very young, that is, delaying it until later when the child is not so exposed to a fatal issue. The best remedy, of course, is to avoid exposure to another case. In times of epidemics young children should be kept at home, and if possible out of contact with other children who are non-immune to measles. But of course this is not always possible, especially in families with two or more children. Fortunately, we have a measure of great value in the use of convalescent serum. Such serum from a recently recovered case can be used to prevent measles if given within five days of first exposure. Even adult blood from one who had measles many years ago can be used. This procedure is, of course, a technical one requiring the doctor's skill and judgment, but should be considered in exposed children under three years. In one North Carolina city it has been used with great success, so that in a whole year no death from measles in a child under three years was reported. But more important than this procedure is the careful

nursing and medical care of the measles patient.

The advice regarding measles can be epitomized as follows: Delay the attack as long as possible. The best time to have measles is about ten years of age. Careful nursing and medical care will prevent nearly all fatalities. Convalescent serum should be considered for exposed children under three years of age.

Description of a Case of Hookworm in Georgia in 1840

Mr. Wm. J. Andrews of Raleigh has kindly sent us an extract from "Georgia Scenes," published and copyrighted in 1840. The book was written by Augustus B. Longstreet, a native Georgian. Judge Longstreet was not only a noted Southern author, having founded the *Augusta Sentinel* and contributed much to the famous *Southern Literary Magazine*, but he was a Methodist minister, lawyer, and judge of the Superior Court, and for many years president of the University of Mississippi at Oxford.

Following is his classic description of an undoubted case of hookworm in Georgia before 1840:

"Ransy Sniffle . . . in his earlier days had fed copiously upon red clay and blackberries. This diet had given to Ransy a complexion that a corpse would have disdained to own, and an abdominal rotundity that was quite unprepossessing. Long spells of the fever and ague, too, in Ransy's youth had conspired with clay and blackberries to throw him quite out of the order of nature. His shoulders were fleshless and elevated; his head large and flat; his neck slim and translucent; and his arms, hands, fingers, and feet were lengthened out of all proportion to the rest of his frame. His joints were large and his limbs small; and as for flesh, he could not, with propriety, be said to have any. Those parts which nature usually supplies with the most of this article—the calves of the legs, for example—presented in him the appearance of so many well-drawn blisters. His height was just five feet nothing; and his average weight in blackberry season, ninety-five."



The Health Bulletin

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MARCH, 1934

No. 3

MOUTH HEALTH TEACHING



SCHOOL DENTIST USING STEREOPTICON IN MOUTH HEALTH
TEACHING IN THE SCHOOLROOM

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly **THE HEALTH BULLETIN** which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	Health Education	Scarlet Fever
Cancer	Hookworm Disease	Smallpox
Constipation	Infantile Paralysis	Teeth
Chickenpox	Influenza	Tuberculosis
Diabetes	Malaria	Tuberculosis Placards
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Don't Spit Placards	Pellagra	Typhoid Placards
Eyes	Residential Sewage	Veneral Diseases
Flies	Disposal Plants	Water Supplies
Fly Placards	Sanitary Privies	Whooping Cough
German Measles		

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)	Baby's Daily Time Cards: Under 5 months;
"Our Babies"	5 to 6 months; 7, 8, and 9 months; 10,
Prenatal Letters (series of nine	11, and 12 months; 1 year to 19 months;
monthly letters)	19 months to 2 years.
Minimum Standards of Prenatal Care	Diet List: 9 to 12 months; 12 to 15
Breast Feeding	months; 15 to 24 months; 2 to 3
Infant Care. The Prevention of	years; 3 to 6 years.
Infantile Diarrhea	Instructions for North Carolina Midwives.
Table of Heights and Weights	

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SCHOOL DENTISTRY IN NORTH CAROLINA

FOR this month's issue the veteran editor of **THE HEALTH BULLETIN** is vacating his chair to Dr. Ernest A. Branch, who for the past five years has been Director of the Dental Division of the State Board of Health. Dr. Branch and his capable assistant, Miss Mary Batchelor, have written or assembled all the material published this month.

On the 10th day of July, 1918, the editor of **THE BULLETIN**, as Director of the Department of Medical Inspection of Schools, employed six young dentists and started them out with portable dental equipment to teach the school children of the State the meaning of mouth health and care of the teeth. The first work was commenced on the above date in a small rural school in Nash County.

Since that beginning sixteen years ago the work has never ceased during school hours. It has been one of the greatest contributions to health and happiness of the people of this State ever inaugurated by the State Board of Health. When the work started 95 per cent of all school children in the State were in need of immediate dental service. Fewer than five out of each hundred who needed dental work had ever seen inside of a dentist's office. Today in many of the schools of the State every child in need of dental attention has had it; and in many schools 50 per cent or more of the children in certain grades have perfectly cared for teeth. The work has been strictly educational and has succeeded in reaching the parents as well as the children. One of these dentists has demonstrated one or more times in every public schoolhouse in North Carolina. Dr. Branch is a teacher of great ability, and since he took over the direction of the work has succeeded in arousing widespread interest among the dental profession and the people. One of the great satisfactions of the editor of **THE HEALTH BULLETIN** is the knowledge that he was able to inaugurate, organize, and execute this great work from the beginning in 1918 and for eight years thereafter; and that the organized dental profession enthusiastically aided him in every way in the support of the work.

The work has been encouraged and supported through appropriations by the Legislature, county and city boards of commissioners and education, by industrial corporations, and individuals. The demonstration work has been confined to school children between the ages of six and thirteen, but the influence has been felt by all of them. Every class of children among both races has been influenced. If Dr. Mayo's statement that 80 per cent of all the ailments of humans may be attributed to mouth origin is correct, then the next generation of North Carolina should be a healthy people.

STATE SCHOOL DENTISTS WITH THE N. C. STATE BOARD OF HEALTH



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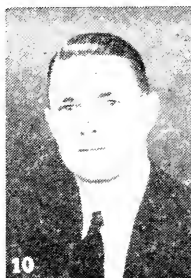
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Mouth Health Teaching in the North Carolina Schools

DR. GEORGE M. COOPER, a physician connected with the North Carolina State Board of Health, was, so far as we are able to determine, the first public health official to place dentistry in a public health program. This was in 1918. In 1919 North Carolina was one of the first states to have a dentist as a member of the State Board of Health, and in 1931 was the first State to enact a law making a dentist a member of every county board of health. Dr. James M. Parrott, upon his election in 1931 as State Health Officer of the North Carolina State Board of Health, dignified the profession in North Carolina by making the Division of Oral Hygiene a separate and distinct entity of the Board of Health.

The purpose of the Division of Oral Hygiene of the North Carolina State

Board of Health is not to operate free dental clinics, but to teach the value of oral hygiene in the prevention of disease.

The dentists in this department are trained as teachers and are capable of going into any classroom and teaching the subject of oral hygiene, which is based on foods, food values, and proper health habits. In our didactic teaching in the classroom visual methods are used, namely, models, placards, blackboard drawings, stereopticon slides, etc.

Dental corrections are also used as a means of visual instruction. The necessary dental work is done for as many children as possible, preference being given to grade repeaters. In this part of our program, before any work begins, the child is shown his own mouth in a large mirror and the existing conditions explained. This gives



DR. G. M. COOPER

a physician and Director of Preventive Medicine of the North Carolina State Board of Health, who was the first public health official in the United States to place dentistry in a public health program.

the dentist-teacher an opportunity to reëmphasize the health truths brought out in the classroom teaching. Of course, the number worked for is reduced to a minimum because we do not reach as many with actual dental work in this way as we would had all of our time been spent at the chair, but those who are fortunate enough to be used for demonstrative purposes have all necessary dental corrections made in the very best manner possible. Those who require dental attention and do not receive it in school are urged to visit their family dentists.

This method of teaching allows the grade teacher to correlate Mouth Health with "reading, writing, and 'rithmetic," history, geography, spelling, etc. It is easily tied in with the

projects and activities of farm agents, home demonstration agents, 4-H clubs, calf clubs, home economics work, and vocational agriculture, as these are all closely associated with foods, food values, and proper health habits.

The financing of this activity is borne jointly by the State Board of Health and local budgets. Local budgets include schools, parent-teacher associations, civic clubs, etc.

The director of the Division of Oral Hygiene is a dentist, and in addition to directing the activity, he spends the major portion of his time lecturing in grade schools, high schools, teacher-training institutions, parent-teacher associations, women's clubs, and civic clubs.—*The Journal of the American Dental Association.*



THE BEST MOUTH HEALTH RECORD IN THE STATE. ONLY ONE CAVITY IN ONE TOOTH IN THE ENTIRE GROUP. ALL HOMES REPRESENTED HAVE COWS AND GARDENS

School Dentists and School Children

By MARY S. BATCHELOR

SAY there is nothing new under the sun and believe it if you will, but prepare for a rude awakening when in these enlightened days and times you see the younger generation dancing with pleasant anticipation over an impending visit to the dentist! That is new!

To those of us who are no longer classed as children, there are memories which, if conjured up, can still cause cold sweat to stand upon our brows and make horrible shivers start at our feet and shake us to the core. Such a memory is that of the pulling of loose teeth not so many years ago. Don't you remember the method in vogue—the string tied to the shaky tooth (of the still more shaky child) and the other end tied to a door knob? And don't you remember the agony you suffered before the gleeful assistant, after long and purely malicious delay, finally slammed the door? Sometimes the other end of the string was tied to a brick which

the unfortunate little sufferer, after gathering his nerve together, was supposed to hurl away from him with all his might. The spirit was willing,

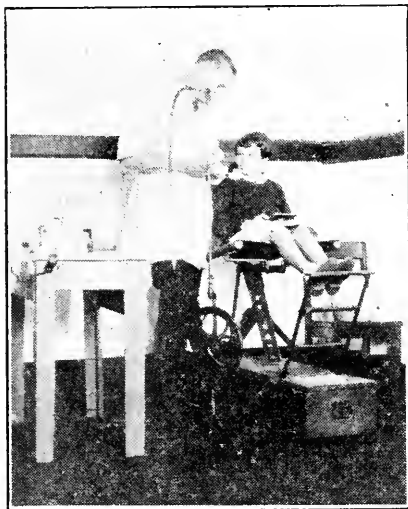


MOUTH HEALTH TEACHING IS FOLLOWED UP BY THE TEACHER WITH HEALTH PLAYS

but the flesh was weak and few of us ever proved equal to the task.

However, anything was better than being dragged, bitterly protesting, to the dentist. There is no doubt about it, in those days the dentist could hardly be called popular with the younger generation. We have come a long way since the days of the door knob and the string. The dentist has ceased to be a combination of Bill Sykes, the Fe-Fi-Fo-Fum giant of Jack and the Beanstalk, and a huge black bear. It took a long time. Even though we remembered well that Jack finally killed the giant and Bill Sykes was hanged, we didn't expect to be as wily as Jack, and we had never heard of anyone having much success with a bear. We frankly expected to be murdered and went to the dentist with fear and trembling in our hearts.

The dentist was badly handicapped. We were taken to him so seldom that we met as complete strangers on the occasion of each delayed and dreaded



"PARTNERS"

THE SCHOOL DENTIST DEMONSTRATING MOUTH HEALTH TEACHING AT THE CHAIR

visit. Nothing that he told us made much of an impression; we were too terrified to listen. It is true that when we reached home we brushed our teeth frantically for a while, but that was only because mother told us if we brushed our teeth we would not have to go back to the dentist, and as time went on we remembered less poignantly our fears and gradually ceased to be concerned.

Now most of this is changed. Children look forward to their visits to the dentist. He is a friend of theirs. Much thought and attention has been given to changing the attitude of the child toward the dentist. Nowadays dentists not only study dentistry; they concern themselves with child psychology as well. They learn how to make friends with the child, how to gain his confidence, and how to teach him the lessons he must learn if he is to have a clean, healthy mouth and build strong, sturdy teeth.

For the school dentist, whose work is mainly educational, this psychology is particularly important. He must know how to make an immediate appeal to the child, since he sees few of his patients more than once. He must know how to gain the child's confidence at once, so that he feels safe and comfortable with him, in order that the stories he tells him may be learned and retained. A mind clouded with fear is barren ground for new ideas. However, there is one trait which we all have in common: we are interested in what pertains to ourselves. The child is no exception. You might talk to him all day about "mouths," and he'd be thinking of the afternoon's ball game, or the moving picture show; but talk to him about his mouth, his teeth, and his food, and he is all attention. He wants to tell you about the tooth he had pulled, the food that he eats. In other words, he is ripe and ready for any lessons that may be learned.

The school dentist makes his corrections as a means of visual education. He gives the child a mirror before he begins his work and fol-

lows every step by showing the child just what he has done or what he is going to do. He has plaster models for additional illustrations and an inexhaustible supply of stories about the mouth. The stories are important. They make learning so much fun. As a matter of fact, the child is unaware of the fact that he is learning. He is simply listening to a story, just as he listened to the tale of "The Three Bears." He won't forget it; not any more than he forgot "The Three Bears."

As stated before, the corrections which the school dentist makes are done as a means of visual instruction. The school dentist is a public health worker, and his field is, after all, preventive dentistry. One of the first principles of preventive dentistry is correct diet. The dentist teaches the child that without the proper foods with which to build and maintain strong, healthy teeth, all the corrections in the world cannot assure him a clean, healthy mouth; and he also teaches him that through broken-down and abscessed teeth and diseased gums other infections may enter his body. Considering the enormous number of children examined by the school dentist, it is readily understandable that only a small percentage of them may receive corrections. Those children whom the dentist cannot reach are referred to their family dentist for corrections. However, all of the children with whom he comes in contact are instructed as to the value of milk and other dairy products, green, leafy vegetables, fruits, breads, and cereals from whole grains in the diet, and all of them are taught the importance of clean teeth as well as proper care and attention.

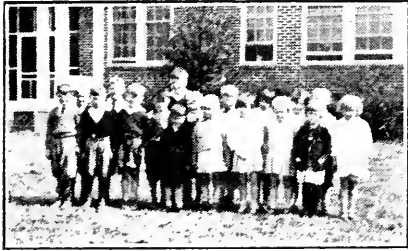
The dentist has done much to increase the child's friendliness for him. We will do much to prevent its loss. For above all things, and at all times, the school dentist realizes that in this friendship and in the child's interest in the lessons which are to be learned lies his mightiest weapon for health education.

It Is Playtime When First Grade Children Go to the School Dentist

Read these letters from children in the Salisbury Schools to Dr. Buie:

"I had a very nice time in your playhouse. I am sure little Miss Fat Dorothy did, too. I would like to see

Their teeth are nice and clean now. I am going to get some more toothpaste and clean my teeth every morning and after dinner and at night before I go to bed. I am very glad

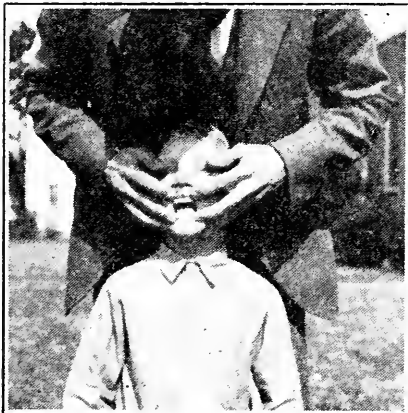


THIS FIRST GRADE HAS THE BEST MOUTHS OF ANY FIRST GRADE IN THE STATE. WRIGHTSBORO SCHOOL, NEW HANOVER COUNTY.

your little girl named Janet. Does she have curly hair like I have? I hope I will see you sometime soon. Come to see me sometime. If you do, bring your little girl. Your friend, Janet."

* * *

"Thank you for looking at my teeth. Come back again. We will be glad to have you. I hope my teeth will be better the next time you come. Sometime before you go I might come to see your playhouse. You have done a lot of girls and boys good.



A FINE BOY AND A GOOD MOUTH



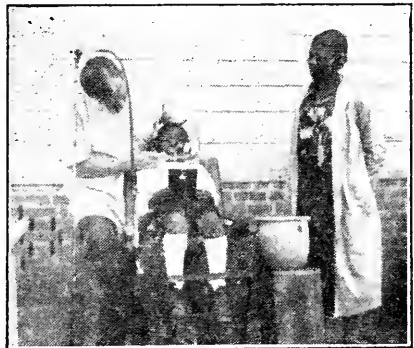
LUNCH TIME AT ROSEWOOD SCHOOL
WAYNE COUNTY

you came to see us. Your friend, Martha."

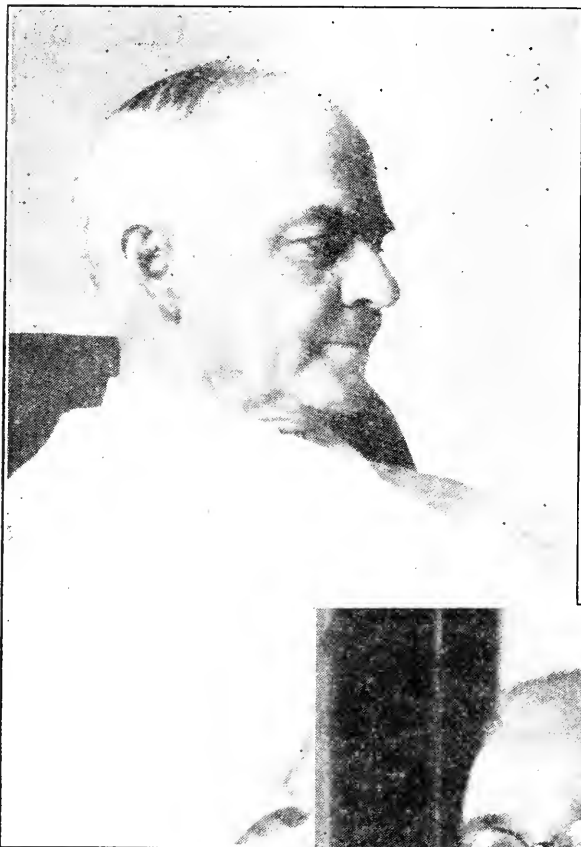
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"Thank you for looking at my teeth. I hope they will be better next time. They were not good this time. I am going to the dentist and let him pull them today, because yesterday it was raining. I did not have them pulled. I hope I will not have any more toothache. I will have better teeth next time.

"I heard about the playhouse. What I heard about it was good. Dorothy told me about it. Dorothy said she had a good time. Janet said she had a good time, too. Your friend, Jane."



MOUTH HEALTH TEACHING IS PROVIDED
FOR BOTH WHITE AND NEGRO
CHILDREN



DR. J. N. JOHNSON

Dental Member of the North Carolina State Board of Health, who is vitally interested in mouth health conditions of the school children.



DR. JAMES M. PARROTT

State Health Officer

who dignified dentistry by creating the Division of Oral Hygiene and placing it on an equal footing with the other divisions of the North Carolina State Board of Health.

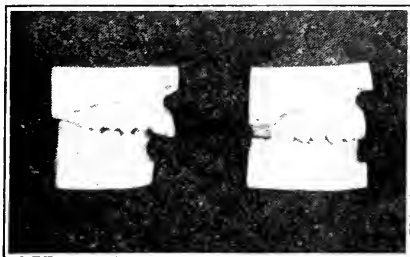
Ultimate Aim of Mouth Health Programs

THE ultimate aim of Mouth Health Programs as conducted by the North Carolina State Board of Health in the public schools is to teach that every child with an unclean mouth is sick. With this in mind, we are endeavoring to have every child's mouth made dentally fit at least once a year.

If you will stop to think just what an undertaking of this kind means you will readily understand how much effort had to be put forward to make it a success; but after the first time it was comparatively easy. Anyway, we are having schools report from all sections of the State that they have almost reached that goal. In a few instances not more than a half-dozen failed to have their mouths made dentally fit. Ledbetter School in Richmond County succeeded in having every child's mouth made dentally fit and a large school in Currituck County lacked only one. Quite a number of others could be mentioned who almost succeeded. This is very encouraging and we are persuaded that by next year there will be a number of schools who have reached the goal.

You, of course, understand that all

children who can possibly do so are expected to visit their regular dentist for their corrective work. The work done by the dentists of the State



BEFORE AND AFTER HIS TEETH WERE
STRAIGHTENED

Board of Health is confined, insofar as possible, to the indigent children, and this is as it should be. There are many, many more indigent children than we can possibly attend to. However, all have their mouths examined by the school dentist and the parents of those who can pay for the work are notified that the child has dental defects that should be attended to by their regular dentist.



THESE MOUTHS ARE SICK



THIS BOY HAS ENLARGED TONSILS

How Mouths of Children In Hall-Fletcher Junior High Were Made Dentally Fit

By MISS RENA NICHOLS, Dean of Girls

WE have three hundred and eighty-two mouths in perfect condition, for the present at least, which means one hundred per cent for the entire school. How did we do it? Set our goal and worked for it!

First, I'll have to tell you a wee bit about our school history. We are known as the "United States" of Hall-Fletcher, because of the fact that each home-room chose the name of one of the states in the Union, and there was elected, instead of a president of every home-room state, a "governor." These "governors," as well as a president, vice president, and secretary-treasurer selected by the entire student body, make up our Student Coöperative Council. Through this organization all school projects are launched.

Each semester the "Dean's Cup" is awarded to the "state" securing the highest number of points along various school lines.

At the beginning of the spring semester in February we decided on the dental work as our big objective. We set aside a home-room period, invited a grade mother of each assembly to be present while examinations were made of every "citizen" in the "state." Lists were made from the results of these examinations, and a little later all grade mothers and the teachers in charge of each home-room were invited to a tea in our lunchroom. At this

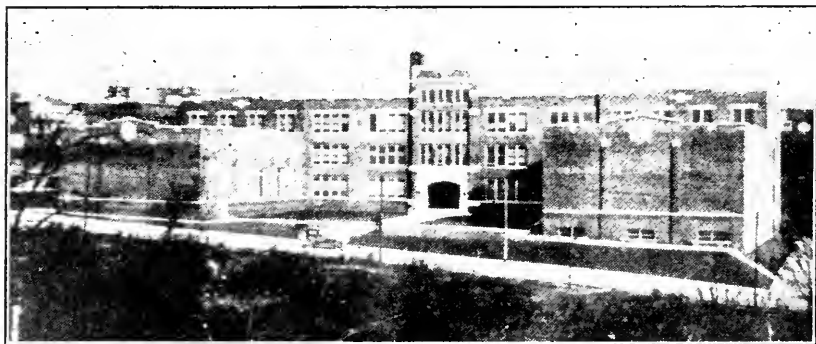
time further plans for the project were discussed. It was decided to send to each parent the following notice:

"Your.....needs dental attention. The health and school work of your child may be seriously impaired by allowing defective teeth to remain uncared for.

Will you have the child's dental work done?"

These slips were to be signed and returned to the home-room "state," and ten points for the "Dean's Cup" were given to each "state" that returned one hundred per cent of the notices, thus securing the coöperation of each parent. It was voted by the Council to give ten additional points for each mouth corrected, and five points for each "citizen" who brought a note from a dentist saying that no work was needed. A bonus of one hundred points went to every "state" which obtained perfect condition of the teeth of all its citizens.

The work progressed rapidly. Dr. Dudley, the State School Dentist, completed the correction of forty-four sets of teeth of students under the age of thirteen. The Parent-Teacher Association financed the dental work of fifteen pupils who were over age and had asked help. Dr. Bennett, who is on the County Board of Health, succeeded in getting work done for fifty "citi-



THE HALL-FLETCHER JUNIOR HIGH SCHOOL. THE MOUTHS OF ALL THE CHILDREN HAVE BEEN MADE DENTALLY FIT TWO YEARS IN SUCCESSION

zens" (with the coöperation of other dentists in Asheville), and home-room teachers and grade mothers got other dentists to do fifteen for us. The parents enabled one hundred and forty-one girls and boys to gain perfect condition of their teeth, while the remaining

one hundred and seventeen needed no attention.

Thus, here we are, three hundred and eighty-two strong, with every molar and incisor in excellent health! We challenge every school in the State to join us!

What Our Friends Have To Say About the Mouth Health Program

NOW that you have read something of the beginning of the Mouth Health Work in the State, it might be well enough to know what we are doing.

It is not a free dental clinic for corrective purposes.

The purpose of the activity is to teach the relationship of an unclean mouth to systemic disease.

This can best be done, we believe, by a dentist who is especially trained to do children's work and one who knows some of the fundamentals of teaching. The school dentist goes into the classroom equipped with a natural love for children and knowing child psychology from intuition and professional training. His first step, upon entering the room, is to make a favorable impression upon every child and to cause them to love him. This is done by his pleasant manner, his address, and that something that words fail to describe, but children understand, that causes them to know that he is their friend and is there to help rather than hurt them.

To do his didactic teaching, he is equipped with plaster models, placards, and a stereopticon. These aids facilitate his didactic teaching and make it easily understood, as they appeal to the eye as well as to the ear.

In addition to this didactic teaching in the classroom, he goes further with his visual instruction by doing the actual work needed in the mouths of as many children in the indigent class as is possible. We must never forget that there are thousands of children in our schools who are indi-

gent and who would never have any dental work were it not possible to have it done in this manner.

The school people believe that it is a splendid way to teach Mouth Health, and that it is a wise investment, paying satisfactory dividends. We are going to let you read what some of them have to say.

Letters

BESSEMER CITY, N. C.,
July 3, 1933.

DEAR DOCTOR BRANCH:

It has been a great pleasure and privilege to have a dentist from your department with us for the past two weeks. To my knowledge this is the first time that Bessemer City has had such an opportunity, and the people responded with very much enthusiasm. During the period that your very able representative was here, 194 school children were examined and treated, and the number would have been greater if time had permitted.

I feel that the work that you are doing is of the greatest importance, and I truly hope that the continued interest of the people of North Carolina will soon enable you to expand even to a greater extent. Your department enables many children to receive medical attention which otherwise they would not have.

It was our good fortune to have with us Dr. A. C. Early. It was indeed a pleasure to have such a man in our town. He is a hard worker, is coöperative, and his personal interest in children is unusual. If all of your representatives are such as Dr. Early you have a group of men in whom you can justly be proud.

The school, the town, and 194 children join with me when I say "We thank you."

Very sincerely yours,

Signed: JAMES R. CALDWELL,
Supt. Bessemer City Schools.

CURRITUCK, N. C., June 24, 1933.

DEAR DOCTOR BRANCH:

You and the dentists that have been sent us by the State Board of Health have certainly sold to local organizations the idea of clean mouths. We were so very glad to have this fact demonstrated by our local representative and Senator in the recent session of the Legislature.

As you doubtless know, we have no dentist in Currituck County. At least half of the population live from 30 to 40 miles from a dentist. The half most affected by the economic depression lives at the greatest distance from a dentist. A large number of parents can no longer buy licenses for their

cars. This naturally means that the children of a large majority of the farmers in this section will go without dental care.

It would be most unfortunate to drop this work at a time when the people have just begun to realize its value but are unable to pay for the service for their children.

We most heartily endorse the mouth hygiene program promoted by the State Board of Health and trust that the school children in Currituck County may continue to enjoy the benefits resulting from the continuance of the program.

Sincerely yours,

Signed: MAUDE C. NEWBURY,
Supt. Currituck County Schools.

Building Our Teeth

By ERNEST A. BRANCH, D.D.S., *Director Division of Oral Hygiene*

IT is said that there is more available calcium in dairy products than in any other source, and yet our milk consumption per capita is low. The teeth and bones respond more readily to some defects in the diet than they do to others. Calcium and phosphorus are essential to the growth and well-being of the body, and especially the teeth (also the bones), and the habitual shortage of lime salts in the food often results in decay of the teeth. In fact, both teeth and bones are chiefly composed of calcium and phosphorus, which must come from the food we eat.

So, the diet should contain sufficient amounts of these tooth- and bone-building materials, but the food is often poor in calcium. Whole milk contains a liberal and well-balanced proportion of calcium and phosphorus and is a great source of available calcium. In fact, milk is considered our finest source of tooth-building material, especially for children, who, according to Sherman, make better use of the calcium of milk than they do of the calcium of vegetables. Children should be given a liberal amount of vegetables, he adds, but in addition to a liberal allowance of milk.

Green, leafy vegetables are a source of calcium as well as other

mineral salts and vitamins. Indeed, leafy vegetables and milk are called by McCollum "protective foods"; that is, they promote the health of the entire body, including the teeth, by helping to make good the deficiencies likely to be found in the diet.

But the presence of the essential minerals in the diet is not the only factor in the building and repair of the teeth. According to Sherman, too small an amount of calcium or phosphorus in the blood is not always due to an insufficient content in the food; the food may contain enough calcium or phosphorus, but its utilization in the body may be perverted.

In regard to calcium, McCollum says: "Experimental studies have shown that the assimilability of calcium depends in considerable degree upon the amounts of phosphorus and vitamin D in the diet, as well as upon the absolute amount of calcium."

Cameron says: "Vitamin D is concerned with normal growth and the correct calcification of bones and teeth. Deficiency leads to rickets and improper teeth formation."

Vitamin D is called the antirachitic vitamin because it may often prevent or cure rickets. It is abundant in cod-liver oil; but Sherman says that "The antirachitic value of some common foods should not be ignored. The

presence of important amounts of the antirachitic vitamin in egg yolk, whole milk, butterfat, and green vegetables has now been demonstrated in sufficient number of cases so that we may regard it as fully established."

Vitamin D is also called the sunshine vitamin because it can be generated in the human skin by action of the ultra-violet rays of direct sunshine (also artificial sunlight). "This is then carried into the circulation," Sherman explains, "and acts in the same way as if it had been acquired through the taking of cod-liver oil by mouth."

So the sunshine vitamin D is an agency that enables the body to make good use of the calcium supplied by the food we eat, and thus to control the development and health of the teeth, and also the bones.

Although vitamin A's specialty is to promote the growth of the body in general and look after the health of the eyes, it is also essential to the health of the teeth, because its abundance in the diet promotes the growth of their tissues and increases resistance to infection, which is of special importance to the gums.

Many staple foods are poor in this vitamin. Whole milk is a very important source of vitamin A.

A continued deficiency of vitamin C in the diet increases the susceptibility to infection, and we are getting more and more evidence that the C vitamin is essential to the growth and health of the teeth, the gums, and part of the bones which hold the teeth in place.

Vitamin C is called the antiscorbutic vitamin because it was found that a lack of this vitamin in the diet was the essential cause of scurvy. One of the symptoms of scurvy is soreness of gums and loosening of the teeth, as in pyorrhea, and it is now claimed that most of the pyorrhea is mild chronic scurvy.

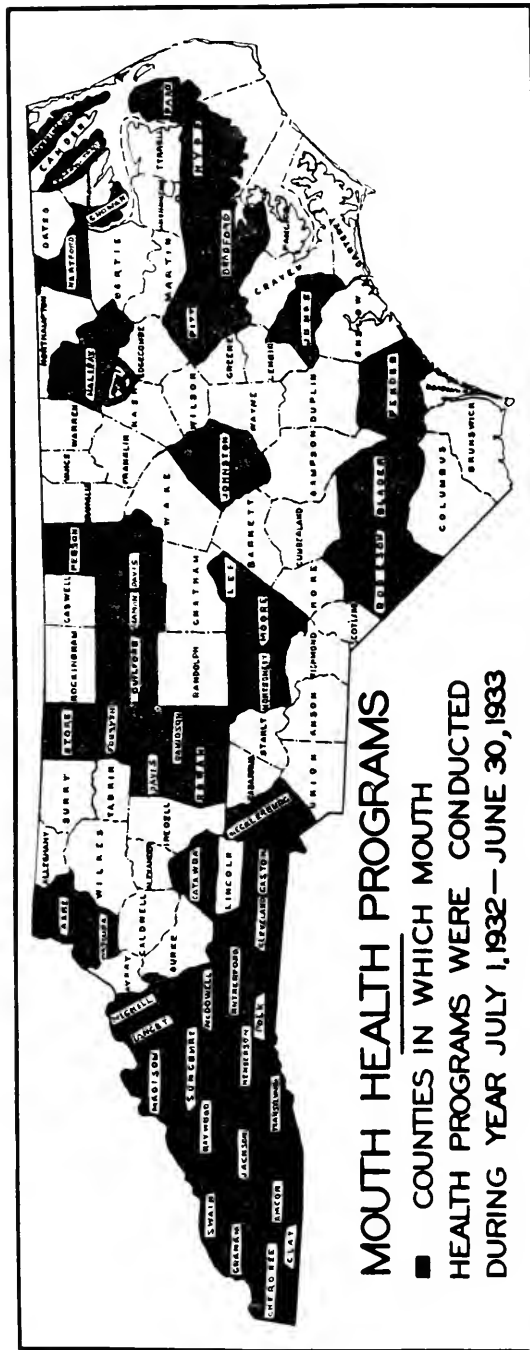
A shortage of vitamin C may also result in the decay of the teeth. Among the richest sources of vitamin C are oranges, lemons, tomatoes, and raw cabbage. Apples, bananas, car-

rots, and potatoes do not contain such a high concentration of this vitamin, but are important as anti-scorbutics because of the quantities eaten. Thus, potatoes become a very important source of vitamin C because of the large extent to which they enter into the daily dietaries of many people, and in practice it is often largely upon potatoes that the adequacy of vitamin C in low-cost winter dietaries depends.

Vitamin C is usually injured by cooking. The tomato is an exception, for canned tomatoes seem to be practically as rich in vitamin C as the raw tomato. Potatoes can be boiled for fifteen minutes without appreciable loss of vitamin C, but when the water in which potatoes are boiled is thrown away, more or less of the C vitamin, as well as other health-building material, is lost.

Not only for the health of the body in general, but also the teeth, we should eat coarse vital food that requires chewing, for the teeth and their surrounding tissues need exercise the same as do other parts of the body; and coarse food gives them this exercise because it has to be chewed, which speeds up the circulation, thus furthering the nutrition of the gums, the teeth, and the bones which hold them in place. Also, coarse health-building foods thoroughly masticated on both sides of the jaws promote the proper and equal development of the jaws, the cheek-bones, and the nose.

We need our teeth as long as we need the rest of our body, and they should last a lifetime. So the food, the exercise, the fresh air, the sunlight that promotes the general health are also conducive to the health and longevity of the teeth. The teeth and body are nourished by the same blood stream. Decayed teeth and tender, swollen gums are diseased and show that the blood stream is not clean, that all is not well with the rest of the body, that too much acid has been lodged in the system. When we obey the laws of health, when our diet consists of cleansing foods with their mineral salts and vitamins, the blood will be charged with life-giving material so that throughout a long life our teeth will be kept clean and strong and beautiful.





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THE HOUSE-FLY

By E. ROSCOE HALL

The common house-fly is a pest,
But he must have his feed;
And things to him which seem the best
Are not the things we need.

Upon the carcass of their dead
He fills his hungry craw;
And then he roosts upon our bread,
Defying hygiene's law.

He lights upon a pile of germs,
And gets them on his legs;
Then next, to speak in local terms,
He rides our scrambled eggs.

He even gets into our greens,
At morning, noon, or night;
He dives into a dish of beans—
A sad, unholy sight!

He broadcasts like a radio,
The germs that cause disease.
Why should we let him thrive and grow
And live a life of ease?

Go swat the rascals! blot them out
From all the filthy hives;
And you will save, beyond a doubt,
A lot of useful lives.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	Health Education	Scarlet Fever
Cancer	Hookworm Disease	Smallpox
Constipation	Infantile Paralysis	Teeth
Chickenpox	Influenza	Tuberculosis
Diabetes	Malaria	Tuberculosis Placards
Diphtheria	Measles	Typhoid Fever
Don't Spit Placards	Pellagra	Typhoid Placards
Eyes	Residential Sewage	Veneral Diseases
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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)	Baby's Daily Time Cards: Under 5 months;
"Our Babies"	5 to 6 months; 7, 8, and 9 months; 10,
Prenatal Letters (series of nine	11, and 12 months; 1 year to 19 months;
monthly letters)	19 months to 2 years.
Minimum Standards of Prenatal Care	Diet List: 9 to 12 months; 12 to 15
Breast Feeding	months; 15 to 24 months; 2 to 3
Infant Care. The Prevention of	years; 3 to 6 years.
Infantile Diarrhea	Instructions for North Carolina Midwives.
Table of Heights and Weights	

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Notes and Comment

IN recent years the annual pre-school round-up of school children who are to enter school for the first time in the fall has been increasing in importance throughout the State. The idea is to get every child between five and six years of age examined for the detection of any physical defect which might be present to a sufficient extent to handicap the child in his progress when he begins school.

There is much detail work to do in connection with this job. In the first place, in every school district in the State it must be somebody's business to take a pre-school census and learn the names and locate the homes of all such children. Then it is necessary to procure the consent of the parent to bring the child to the schoolhouse on a day set apart, usually in March, April, or May, at which time the child will have this examination made. It is necessary for a trained nurse and a practicing physician to be present and carry out this examination. After the child is examined and any handicap noted, the parent is then urged to take the child to the family doctor or the dentist, as the case may be, and have any remediable defects corrected: such items as decayed teeth needing extraction or repair by the dentist; faulty vision in which the child may need eyeglasses; diseased throat in which an operation may be necessary for removal of tonsils or adenoids; undernourishment indicating not only the lack of proper food habits, perhaps, but also in many cases some more remote diseased condition. When such children

are examined, properly treated, and the nutritional condition improved, they may be ready to enter school in the autumn with prospects for a successful career much enhanced.

Another important item to consider in these pre-school round-ups is that of immunization against preventable diseases. There are three diseases which may be prevented in most cases by proper immunization. These are smallpox, typhoid fever, and diphtheria. Diphtheria remains a serious hazard for all children in the State. A large percentage of children who have diphtheria, and of those who die from it, are children under six years of age. It is very important, then, that babies when reaching the age of nine months should be immediately immunized against diphtheria, and in all cases children should be vaccinated against smallpox before being allowed to start school.

Some of this work may be done at the time of the pre-school round-up by the physician making the examination. Most of it will have to be done by the family doctor sometime during the summer before time for school to open. There should be pre-school round-ups this year in every county in North Carolina. The system should be State wide, and the recommendations of the physicians making the examinations should be carried out in every instance.

* * *

THIS is the time of the year when the patent medicine agent is abroad in the land. A long time ago April was the month of molasses and

sulphur for the youngsters who were too helpless to protect themselves. The old-time druggists used to dress their windows with great big bottles of different kinds of colored medicines, nearly all of them labeled "blood purifiers" and so on. In recent years the patent medicine business, like all other commercial enterprises, has been systematized and been carried on according to what might be called "modern sales principles."

Almost a century ago doctors in various sections of the country in their associations were beseeching the legislatures to enact laws protecting the public against false advertising of drugs, particularly the advertising of claims which the advertisers knew were not possible for the drugs to accomplish in the way of cures. The old-time "court-week spieler," who always visited the county towns at the time of the semi-annual courts and regaled the natives under the light of the great oil torch at night, selling snake oil, with the snake in the box for the people to see, or bear grease, with the bear along in the cage as an illustration, and so on, is seldom seen any more. In his place handbills and newspaper advertising confront the people on every hand. Fancy names are given to old drugs which still possess their potent qualities. Old remedies, such as Epsom salts or Glauber salts, are dressed up in fancy packages and labeled with some fancy name, and five cents worth is sold for about a dollar or more under the advertising which is now permitted by law. As a specific example of a success among this type the following little item, in which a combination of salts is dressed up and advertised on front street, may be seen in an item in Eugene Ashcraft's column in the *Monroe Enquirer*, to wit:

"CRAZY WATER"

"Speaking of 'medicine,' and one highly advertised just now, is crazy water crystals. Recently a man, maybe a woman, told me he or she had taken the crystals

which looked like salts and placed them in water. The concoction then not only looked like salts, tasted like salts, but by gravy, acted like salts. But you can't purchase as much crazy crystals as you can carry, as is the case of plain old Epsom salts, for a nickel."

* * *

APRIL is the month in which the old-time farmer "beds" potatoes. In the old days down in Sampson most of the people in that county were farmers or directly dependent upon farming for their daily bread. There were two things that were compelled to be done on April 1—All Fools' Day. First, all the little boys among the better class of farmers were allowed to pull off their shoes and long winter stockings and go barefoot. Second, the "hill" of "slip" potatoes was uncovered and the potatoes which had not rotted through the winter's cold and wet were spread out in a neat "bed," something like a hot-bed or a cold-frame, and covered with fertilizer and soil. About a month later, from this bed fine sweet potato plants were pulled out and transplanted to a field known as "the potato patch." In those days the principal variety was the fine old Norton yam. This was a yellow variety of sweet potato that could not be beat on this earth for a good morsel of food. It was fit to grace the table of kings, governors, or anybody else; and about half the population of Sampson at least depended upon that as a staple item of food all the winter.

All of the foregoing is mentioned by way of introduction to the following statement, and that is that scientists have now very well demonstrated that this old ordinary yellow sweet potato—in other words, the yam—when baked or roasted in the skin, affords one of the most valuable sources of vitamin A known. Now, you know vitamin A is the vitamin which chiefly promotes growth, prevents a certain type of serious eye disease when the diet is deficient in this vitamin, and also prevents rick-

ets. Some of these scientists go so far as to say that two or three of the ordinary size yellow sweet potatoes a week will supply an individual, particularly a growing child, with all this essential vitamin needed. You know the scientists have a way of eventually coming around and discovering what many people have discovered for themselves through long years of practice and experience. It is encouraging to know that the scientists now have proved the yellow sweet potato to be one of the finest

items of diet on any man's table.

April is the month to start the sweet potato crop. It is hoped that North Carolina will have a big crop of this product this year. It should be borne in mind, however, in preparing for the potato crop, that the yellow variety—in other words, the old-time yam—is the one that contains the vitamin A. The white, or dry, variety of sweet potato has no more vitamin A than the white Irish potato, and both have practically none.

Maternal Mortality

IN *The State* of February 10th, Charlotte Story Perkinson tells how she has sworn eternal warfare in North Carolina against capital punishment, against high maternal and infancy death rates, and the inertia or what-not that prevents a free library being in reach of every citizen.

"She concentrates in this article on the deplorable fact that the rate of death among mothers of this State is 8.5 per 1,000 of live births, as compared with 6.5 per 1,000 for the United States.

"Here is the most astounding part of the story. A large percentage of such deaths is due, not as commonly thought, to septicemia or blood poisoning, but to prenatal neglect, which means neglecting to have a doctor in charge of the case long enough before the emergency of childbirth.

"But Dr. Cooper of the State Board of Health is quoted as describing an even more astonishing situation concerning the death rate in childbirth. Regardless of the Negro population, and allowing for the fact that many whites are unable to engage a physician, Dr. Cooper states that the primary cause of this high death rate probably is 'the prevalent notion that childbearing is a natural process and that death from such a cause is but the will of God.'

"This is a reminder to some of us townsmen that we may have forgotten our North Carolina, its wide rural spaces, supporting in some fashion hundreds of thousands of whites and blacks with a meager physical life, and a mental life on the verge of

starvation. And is that fatalistic creed unknown in the towns?"—*Asheville Times*.

The above editorial summarizing Mrs. Perkinson's article, with the pertinent comments by the editor of *The Times*, is a brief and accurate statement of a situation which is bearing heavily on the conscience of our people. There is one favorable modification now which should be stated. Mrs. Perkinson used the 1931 mortality figures. The provisional rate for 1933, just compiled, reduces the maternal death rate in North Carolina to the record low of 6.7 per 1,000 live births. The national rate also for 1933 will be lower still. But our favorable progress indicates the widespread discussion prevailing throughout the State for the past few years and the intensive efforts being made to prevent such deaths is producing results.

THE FRONT COVER

Eight years ago the editor of THE HEALTH BULLETIN wrote to Mr. Hall, a talented friend of his boyhood, and requested a contribution. He immediately responded with the poem which is reproduced this month on the front cover. It was first published on the front cover of the April, 1926, issue of THE BULLETIN, and elicited much favorable comment. The author died at his home in Wilkesboro several years ago.

Food Sanitation

By M. F. WOOTEN, JR., Assistant Engineer, State Board of Health

FOOD affects health in many ways, and scientific knowledge of the subject is increasing continually. The vitamins, unbalanced diets, the effects of diet deficiencies, and overeating are all very important to the physician, dietitian, and nurse; but here we will confine ourselves to another aspect—the sanitation phase.

There are, primarily, about five agencies through which food may cause suffering or death. These are:

1. Animal parasites such as tapeworms and the trichina worms, which gain entrance to the human body through the eating of infected meat or fish which has not been cooked sufficiently to kill the immature worms.

2. Bacteria, such as tuberculosis or typhoid in milk or typhoid in oysters or on lettuce or celery. All pathogenic organisms capable of being transmitted by foods are included here.

3. Toxins given off by certain bacteria growing in the food. Under this heading botulism, or the disease caused by the *B. botulinus*, is the only one of any particular importance. However, in some instances, it is said that such organisms as, for example, *Bacillus paratyphosus B* will cause illness due to pre-formed toxin.

4. Poisons evolved during the process of putrefaction. These would include the so-called ptomaines. There are some authorities who contend that such poisonous compounds do not exist, and that such poisonings are due to the second and third groups mentioned above.

5. Poisons placed in the foods for preserving purposes, coloring, adulteration, or entering by accident.

The Tapeworm a Food Parasite

The beef, pork, and fish tapeworms and the trichina worms are generally considered when speaking of the food parasites. Of these, the beef tape-

worm (*Tænia saginata*) is the most common in the United States. It is not very dangerous except as a possible cause of anemia. The adult worms live in the intestines of man and give off eggs which leave with the feces. Cattle eating or drinking infected food or water will ingest the eggs, which mature in the intestines. From the intestines they enter the muscles and there encyst themselves to wait until the animal is slaughtered and the beef eaten. These cysts are also known as "measles" and are readily visible to the naked eye. It is quite safe to eat measly beef, provided it is well cooked.

The pork tapeworm (*Tænia solium*) is not so common in this country. It is quite similar to the beef worm except that it is transmitted by hogs rather than cattle, and the eggs which are given off by the adult worm may also hatch in the human intestines. This means that the larval worms will encyst themselves in the muscles. Should they choose the eye or brain for this, there may be serious results. For this reason the pork tapeworm is considered more dangerous than the beef worm. Thorough cooking will kill both.

The fish tapeworm (*Dibothriocephalus latus*) causes severe anemia. It is very likely to occur among people who eat much fresh fish, particularly if it is eaten raw. The life cycle is different from those tapeworms already mentioned, in that the adult lives in the human intestines and the eggs are in the feces and infect the water of rivers or bays. In the water, the eggs hatch into small motile embryos which at the first opportunity enter the body of a small crustacean (microscopic aquatic life—cyclops). When the crustacean is eaten by a fish, the larva makes its way into the muscle tissue, there to wait until eaten by man. Adequate cooking of fish and proper sewage disposal are the preventive measures.

Trichinosis, which is caused by the trichina worms (*Trichinella spiralis*), occurs in this country, but is more common abroad. It is more common in countries having the custom of eating raw pork in sausage. The larvae also imbed themselves in the muscles in a similar manner to the tape-worms. The disease trichinosis only occurs if the infection is severe, and it is sometimes fatal. The movement of the worms into the muscles is accompanied by intense pain, fever, and other symptoms. Infection is obtained only by eating infected meat. Hogs which have been fed on garbage containing pork scraps or slaughter-house refuse are likely to be infected. Here, again, thorough cooking will kill the worm. Also, pickling, salting, and smoking will kill them if it is thoroughly done. Cooking before eating is, however, the best insurance.

Avoid Infected Food

Under our second classification of agencies, bacteria, we include foods which are often or always eaten raw and certain other foods which are ready prepared or eaten without re-cooking. Lettuce, celery, milk, oysters, and a host of others are included under this. The sanitary surroundings of the source of production, packing, and handling, and the health and habits of the persons doing the handling, are items to be considered here. Also, we must always consider the source of the food. In the case of food products of animal origin, the contamination may be derived from a diseased animal. The flesh of animals suffering from septicemia and diarrhea or tuberculosis or certain other diseases may serve to transmit the organism to the consumer. Milk from tuberculous cattle may contain and transmit tubercle bacilli.

Another type of contamination may be seen by using the oyster as an example. Oysters eaten raw are often responsible for outbreaks of typhoid fever, although in recent years more rigid oyster sanitation regulations have been passed and are being enforced.

Oysters become infected from the water in which they are grown or during the processes of handling, shucking, packing, or shipping. The menace of contaminated oysters is increasing with increased pollution of coastal waters, particularly of the bays and estuaries in which the oyster beds are located. Since oysters require only a moderately saline water, the oyster-producing areas are necessarily located near the mouth of rivers. And since many cities are located near river mouths and discharge their sewage untreated, the danger is apparent.

Many gallons of water pass through the oyster in a day in feeding. From these gallons of water, *B. coli* and possibly *B. typhosus* may be accumulated either in the alimentary canal or in the shell liquor. The feeding and other life processes of the oyster slow down materially in cold weather, and the oyster tends to cleanse itself of bacteria. For this reason oysters are usually of better quality in the winter.

The sanitation of shucking and packing plants involves the use of clean water, safe toilets, general cleanliness, and health certificates for the workmen. The shucked oysters should be shipped in sterilized containers, with a separate container for ice. Both the shucked and shell oysters should be kept between freezing and 50 deg. F. all during shipping.

Botulism and Putrefaction

Our third classification has to do only with the disease caused by the *B. botulinus*, or botulism, so far as is now known. This disease is not very common in the United States, but is somewhat more prevalent in Europe. The causative organism is widespread in soils, hence it may very easily get into foods. Careful cleansing and thorough cooking of the food is important. The bacillus may infect canned meats, sausage, or vegetables, and is most likely to be encountered in home-canned foods, thereby showing the effects of underheating. Only about one-tenth of all reported cases have been due to foods processed in

factories. There are probably a large number of unrecognized cases, since heating the food involved appears to have some neutralizing effect upon the poison and causes the case to be very mild.

The infected foods usually, but not always, show signs of spoilage. Therefore, extreme care must be taken that no apparently spoiled foods are consumed. In the case of botulithic infection very small amounts of the food are dangerous; even tasting has resulted fatally.

Next, we have the poisons evolved during the process of putrefaction. The decomposition of food includes fermentation and putrefaction. The former is the breaking down of carbohydrates with the formation of alcohol, acids, carbon dioxide, and other products. Putrefaction is accompanied by unpleasant odors. Neither of these processes poisons food. As a matter of fact, they are utilized in the making of bread, butter, cheese, and many other food products. Ptomaines and other products are formed during decomposition, but very few of them are poisonous. Certain authorities on the subject are agreed that the so-called ptomaine poisoning does not exist, and that it is infected rather than decomposed food that is dangerous.

The term "food infection" is here applied to a rarely fatal disorder, accompanied by vomiting, cramps, diarrhea, and fever, which is caused by bacillus enteritidis or kindred organisms of the colon-typhoid group. These bacteria may occur in any kind of food, meat, fish, or vegetables, which has become infected, although they most commonly cause trouble in food which has been preserved in some manner, thereby giving the organism an opportunity to multiply. Sickness from this source may be prevented by thorough cooking of all foods, which kills the bacteria and also their toxins; by keeping foods clean and fresh, by storing in refrigerators at temperatures at or very near to freezing; and in the case of preserved or pickled foods, being

sure that the brine or other preserving agent is strong enough to inhibit bacterial growth.

Poisoning of canned foods from the container is not likely. Cans are usually made of sheet-iron coated with tin. The tin, if free from other metals, especially lead, will do no harm to the contents, even though the acids of tomatoes, various fruits, shrimps, etc., are rather active in dissolving it. Tin, however, is not very poisonous and, unlike lead, is not cumulative in the system; the small amounts ingested in canned foods are immediately eliminated. Some authorities insist that canned foods are the safest foods that come to our tables.

In a future article there will be discussed, more in detail, certain other items of sanitation, certain devices used in violating the Pure Food Laws, inspection methods used in enforcing these laws, and some of the Pure Food Laws themselves.

MOTHERS

The late Dr. J. Whitridge Williams, professor of obstetrics at Johns Hopkins and author of a textbook on the subject, said once that "When the women of America recognize the value of and need for maternity care they will demand it, and then, and then only, will they get it."

The problem in North Carolina is to get the expectant mothers and their husbands and families to recognize the grave need for and value of competent maternity care.

The city of Charlotte seems to be demonstrating the fact that the need can be supplied when the demand is sufficient. In 1933 in that city 1,726 births were reported, with only two maternal deaths in the entire year. One of the lowest death rates ever recorded anywhere at any time.

In February the deaths of 528 infants under one year of age were reported to the State Board of Health. In February one year ago only 432 deaths occurred. This is distressing news.

First Aid To Prevent Suffering

By MARY CHEATHAM

MINOR accidents are of all too common occurrence. They just will happen even in the best of families. Even when the injury does not appear serious at first sight, a little timely application of first aid will lessen much present suffering and may prevent future developments of a more serious nature.

Fainting

One of the most common ailments usually treated by the amateur is fainting. This may result from any one of a number of surface causes—prolonged standing, hot stuffy rooms, emotional shock, loss of blood, general weakness or fatigue; but in all cases the physiological cause is the same—an insufficient supply of blood in the brain. This condition suggests its own treatment. Have the patient lie down with head low so the blood can more easily return to the brain; apply cold to his face and give fresh air. This latter applies in any accident. This is usually sufficient to restore consciousness, but inhaling smelling salts or aromatic spirits of ammonia also helps. Loosen any tight clothing which might interfere with breathing or circulation. When the patient is able to swallow—not before—give stimulants such as aromatic spirits of ammonia or hot coffee. Loss of consciousness may usually be prevented by sitting or lying down at the first sign of faintness. If he is in a crowded hall where it is impossible to lie down, bend him forward with head between the knees. A person who faints often or for trivial causes should consult a physician.

Heat Exhaustion and Sunstroke

Somewhat allied to fainting in that they all affect the nervous system, but not to be confused with fainting, are heat exhaustion and sunstroke. These two differ widely in symptoms and treatment and are not to be con-

fused. Sunstroke is much the more serious of the two.

In heat exhaustion the patient may or may not be unconscious. He is pale, with cold, clammy skin, and weak pulse. Call the doctor and treat heat exhaustion as for shock: (1) rest (have the patient lying down with head low in a cool, quiet place); (2) heat (have the patient in a cool room, but keep him warmly covered, using hot-water bottles if necessary), and (3) stimulants (as soon as the patient is able to swallow, give stimulants as in fainting).

Sunstroke is totally different. Here the patient is always unconscious, with face deep red and skin very hot and dry, and pulse fast. The treatment is in many ways the complete reverse of that for heat exhaustion. In sunstroke, call the doctor at once. Have the patient lying down, but with raised head. Apply cold, the colder the better, to the patient's body and head, using ice caps, cracked ice, or sheets wrung out in cold water. Never give stimulants for sunstroke.

If in the excitement you forget which treatment to use, stop a moment and give your common sense a chance to direct you. If the face is pale, have the head low so the blood can reach the head; if it is flushed, raise the head so the blood will be drawn away. If he is cold and clammy, apply heat; if hot and dry, apply cold. If the pulse is slow and weak, give stimulants to increase the heart action; but if the pulse is already strong, do not give stimulants.

Sunstroke can often be prevented by the observance of a few simple precautions. Drink plenty of cool water at frequent intervals; wear light, cool clothing, and avoid staying in the direct sunlight too long on hot days. If you must be out in the sun long, wear a big hat which shades the face. Leaves or a wet sponge in the hat on excessively hot days will often prevent sunstroke.

Convulsions

The fourth emergency affecting the nervous system is convulsions. This condition is always serious, and a doctor should be called at once. The patient is always unconscious, with twitchings of the muscles of face and body. There may be some foam at the mouth. The face is first pale and then deeply flushed. Treatment for convulsions is to keep the patient absolutely quiet and do something to draw the blood away from the head. Moving the patient as little as possible, undress him and put him to bed with warm blankets and hot-water bottles to his body. Apply cold to his head by ice pack or compress. Put a wedge, such as a rolled napkin or a wrapped spoon handle, between patient's teeth to prevent biting the tongue. A warm bath helps check the convulsions. To avoid scalding the patient, test the water with your elbow rather than your hand until it is comfortably warm. Remove patient from the bath and put him warmly to bed when the convulsions cease. Quiet is absolutely essential.

Minor Cuts

The most common accidents in the average household are the groups of minor cuts, burns, nosebleed, and foreign bodies in the eyes or ears. In treating minor cuts remember that the smallest cut or scratch may be a source of fatal infection. Never neglect even small scratches, as germs may enter through any break in the skin. Try to destroy all germs already in the cut and prevent any others from entering. Observe absolute cleanliness in your own hands and in any dressing used. Clean the wound with a disinfectant such as hydrogen peroxide, or warm boiled water. Paint into and around the wound with tincture of iodine or a 2 per cent solution of mercurochrome and allow it to dry to prevent blistering. Apply a sterile dressing such as can be had ready for use at any drug store. In case of emergency any clean, freshly laundered white cloth may be used, but except in dirty or dusty places no dressing is better

than an unsterile one. Splinters should be removed with a needle (not a pin) sterilized by passing it through the flame of a match. Then treat as an ordinary cut.

Burns and Scalds

Burns and scalds are always painful, and except in very minor cases should be treated at once by a physician. Even minor burns need immediate attention to allay the pain. For minor burns or scalds, carbolated vaseline, boric acid ointment, any good burn ointment, pastes made from baking soda or Epsom salts in water, or any clean, sterile, oily substance will relieve pain. In the case of acid or alkali burns, first wash off and neutralize at once. Neutralize (make inactive) acids with a mild alkali such as baking soda, weak ammonia, prepared limewater, or soapsuds. Neutralize alkalis with a mild acid, as vinegar or lemon juice. Then treat as an ordinary burn.

Nosebleed

Nosebleed is common but not serious unless it persists in spite of treatment. In that case consult a doctor. For ordinary cases apply cold compresses to the nose, face, and neck. If necessary, apply pressure with a tight wad of paper or cotton under the upper lip, or press the upper lip firmly with the fingers.

Foreign Bodies in the Eyes or Ears

All of us are acquainted with the excruciating pain of something in the eye or the ear. In either case, if you are attempting first aid, remember that both organs are very delicate and may be seriously injured by injudicious prodding. Never rub the injured eye, as rubbing only makes the object more deeply imbedded. Foreign bodies in the eye may often be washed out by tears. Close the eye softly until tears accumulate. If this method fails, try pulling the upper lid slightly out and down over the lower lid. If necessary, examine under the lids. For the lower lid, have the patient look up and pull the lower lid slightly out. To examine the upper lid, have the patient seated

in a good light with head back and eyes down. Standing behind him, pull the upper lid down and out and roll it gently back over a match, cotton swab, or other slender object placed over the middle of the lid. If the speck is visible it can usually be removed with the corner of a clean handkerchief. If it cannot be removed or seems deeply imbedded in the eyeball, apply cold compresses and bandage lightly and call the doctor. Cold compresses or a drop of clear castor oil or mineral oil is soothing after the object is removed. Always treat the eyes very gently.

Foreign bodies in the ear, unless seen and easily removable, should be removed by a physician, as amateur prodding may injure delicate membranes and cause permanent deafness. An insect in the ear causes acute pain and should be removed at once. Never poke in the ear with hairpins, crochet hooks, or similar instruments.

Bruises

Another group of injuries, bruises, sprains, dislocations, and fractures usually result from the same type of accident—falls or meeting hard objects, etc. They are, however, different in symptoms and treatment. Bruises are not serious, but may be painful. Applications of cold water, rubbing alcohol, witch hazel, arnica, or ice caps usually relieve pain.

Sprains and Dislocations

Sprains and dislocations are more serious, and both should have the attention of a physician. But as both are extremely painful they need temporary expedients to lessen pain until the doctor comes. Place the patient in a comfortable position with the injured limb elevated, and apply heat or cold or alternate heat and cold, frequently changed.

Fractures

Fractures or broken bones are very serious and should never be set by the amateur. If the doctor cannot be located at once, it is usually better to allow the injured limb to wait, if necessary, for a day or two, rather

than for an amateur to attempt to set it. In the case of fracture the injured part may look different from its uninjured mate; there is intense pain and rapid swelling. The patient is unable to move the limb, and if anyone else moves it there is more motion than there should be. You may hear the ends of the bone grating. Never move the bone trying to hear this. Leave that for the doctor. Make the patient as comfortable as possible until the doctor arrives, and if it will be some time before he comes, immobilize the injured part by some kind of splints. Remove clothing from the injured limb by cutting open seams. Never move a broken bone trying to get it out of a sleeve, etc. Very, very gently, and without forcing it, put the injured part as nearly as possible in its normal position and hold it there with splints bandaged firmly but not too tightly into position. Splints should extend beyond joints both above and below the injury. Splints should be padded with cloth, cotton, leaves, straw, etc., particularly where they come against a joint. Flat splints are best, but in an emergency anything rigid may be used—umbrellas, sticks, shingles, etc. If you are in doubt if the bone is broken, call the doctor anyhow, and don't be looking for symptoms.

Summer Injuries

A few miscellaneous injuries remain which, because of their greater prevalence in that season, we may call summer injuries. These are snake bite, poison ivy, insect bites, and dog bite.

Snake Bite

The seriousness of snake bite depends on the snake. The majority of American snakes are non-poisonous, and their bite may be treated as an ordinary wound. But the rattlesnake, copperhead, water moccasin, and coral snake are poisonous, and their bite unless properly treated may be fatal. Poisonous snake bites cause intense pain and rapid swelling, and symptoms of shock soon follow. The patient's condition is dangerous for from twenty-four to thirty-six hours.

Call the doctor at once, telling him the trouble so he can bring the antivenin serum, but do not wait for him to come. Act immediately. (1) Prevent the poison from spreading over the body by applying a tourniquet just above the bite. (It is nearly always on the arm or leg.) A shoestring, handkerchief, necktie, or bandage may be used. It should be tight enough to make the veins in the limb stand out, but not tight enough to stop all circulation from the arteries. It should not be left on for more than an hour. (2) Cross-cut the wound at least as deep as the bite with a knife or other sharp instrument, cutting slashes about half an inch long in each fang wound. Squeeze and massage the wound. (3) Further remove poison by some form of suction. First-aid kits usually contain some form of suction device, but if you have nothing else, suck the wound with your own mouth. If you have no cuts or sores it will do you no harm. If you are inclined to feel a bit squeamish about such a procedure, remember that a human life is at stake. (4) Keep the patient lying down and treat for shock—rest, heat, and stimulants. Contrary to widespread popular belief, alcohol or whiskey is not a good remedy for snake bite.

Insect Bites or Stings

In this climate insect bites are rarely serious, but they are very annoying. Everyone who plays golf or goes on picnics or camping trips has paid the piper with hours of itching agony from mosquito or chigger bites. A warm bath with a spoonful of household ammonia or baking soda added to the water as soon as possible after such exposure effectively stops the itching usually. Or a drop of ammonia may be applied to individual bites. Where there is sharp pain and swelling, as in wasp or hornet stings, a compress of wet tobacco is soothing. Cold water, rubbing alcohol, or wet salt may also be used. Refrain from scratching, as that may cause infection.

Poison Ivy

In order to avoid poison ivy it is advisable to be acquainted with the plant. It is a creeping plant with small pointed and slightly notched leaves in groups of three to a stem. It turns a brilliant red in the fall. Another variety resembles the sumac. Preventive measures immediately after contact with the plant will usually check the development of the inflammation. Scrub the exposed parts with soap and water and wash with rubbing alcohol. If the inflammation develops, avoid scratching, as that spreads the inflammation. Clean the affected parts as above and apply wet compresses of strong Epsom salts solution or baking soda or carbolated vaseline until a physician can be consulted.

Dog Bites

Dog bites have a double danger, that of infection which any wound has, and specifically the danger of hydrophobia if the bite is by a mad dog. Consult the doctor about every dog bite. Hydrophobia is preventable by the Pasteur treatment, which any doctor can describe and administer. Never attempt to suck a dog bite, or to apply a tourniquet, because the poison acts very slowly. If there is any suspicion that the dog has hydrophobia, do not kill the dog. Keep the dog under close observation, preferably of a veterinarian, for a period of two weeks. Keep the dog confined during this period.

Home First-Aid Equipment

In conclusion, we might consider first-aid equipment which every home should have ready for emergencies. A well-equipped first-aid cabinet should contain sterile gauze in a sealed package, bandages of several widths, absorbent cotton, and several prepared cotton swabs kept in a closed jar, safety pins, scissors, adhesive tape, sterile dressing, Epsom salts, aromatic spirits of ammonia, baking soda, tincture of iodine, rubbing alcohol, and vaseline. Other articles may be added, but for the most common accidents these will be sufficient.

Says Doctors Must Study Alcoholic Problem

AS doctors we must begin to think of promoting the cause of temperance. How often do we hear, when we are speaking of a certain man, "A very bright man, but he drinks." Of my classmates in college, so far as I know, none of those who drank steadily is now living, and of those who were addicts to even a very mild degree, from the time the addiction became manifest none progressed or maintained his position. One of the greatest surgeons in the world, talking to me, said he had never known a surgeon of the first rank who was in the habit of using alcoholic drink.

The medical men are many whose memories go back to the time not only of the corner saloon, but of several saloons in the middle of the block as well, where the American citizen who so desired could stop to spend his money and drink the shoes and stockings off his children's feet, and then go home to beat his wife. This was called an expression of personal liberty.

Now that the prohibition act has been repealed, both wets and dries have agreed that the old-time saloon must not return, and this agreement

of itself is worth what the prohibition experiment has cost us.

It has been stated that during the period of prohibition more alcohol was consumed, peddled about as bootleg liquor, than before the Volstead Act was passed. For those of us who remember the old saloon days when a town of 10,000 had from fifteen to twenty saloons open for business from 5 o'clock in the morning to midnight, each with two or three bartenders, it is a little hard to believe that peddling bootleggers could turn loose the same amount of liquor in a community, at least as far as the common man is concerned, as did the saloons. If this were the fact, certainly the liquor-cure institutions which fattened off the man who was trying to overcome his infirmity would not have disappeared so completely from the scene of action.

My idea in bringing this matter to younger minds, because the future rests with you, is to see whether you cannot get at some answer to the alcohol problem, which has seemed up to the present time to have aroused only sound and fury and controversy.—DR. W. J. MAYO, in the *Bulletin of the Mayo Clinic*.

Unenviable Position For Two Counties of Area

IN a recent tabulation of census reports two counties of the Roanoke-Chowan area are but little removed from the bottom place among the counties of the State in their infant death rates for the year 1932. Hertford County is third from the bottom, only Lenoir and Perquimans having a higher infant death rate, and Bertie just ahead of Hertford; while Northampton gets a favorable position and Gates is listed as better than the average in the State. There is a wide margin between Hertford and Bertie death rates and that of its sister county, Northampton.

Hertford, with 110.3 deaths out of every one thousand born, and Bertie

with 109.1 of the one thousand dying before they reach the age of one year, are holding unenviable positions among the one hundred counties of the State. Northampton, on the other hand, with only 49 deaths out of every one thousand infants, gives proof of better health conditions than its neighbors; while Gates, with 60.1 deaths out of each one thousand born, ranks better than the average of 67.2.

Without attempting to make explanation of the wide margin of separation, we are led to wonder if Northampton County cannot point to its whole-time health program as a leading factor in its showing in re-

spect to infant mortality. It is the only one of the four that has consistently through a period of years maintained its health department on a full-time basis. It is safe to presume that its attention to health conditions has played a part.

In a discussion of county health problems, the editor of the *News Letter*, published by the University of North Carolina, offers the following pertinent facts and suggestions for the improvement of health agencies in North Carolina counties:

"The North Carolina counties that do not have whole-time health officers are generally the small, poor, and less populous ones. These counties do not feel that they can afford health officers. In many instances the counties really are too small to serve as health units. The only hope under

present conditions is for two or more such counties to join together for health work. In Michigan nineteen of the twenty-nine counties with whole-time public health service are organized into health districts. There are four districts of four counties each, and one with three counties.

"The sensible thing would be for North Carolina counties to consolidate. At present only those with sufficient population, area, and wealth can afford health work, farm demonstration agents, welfare officers, and other modern necessities. Possibly consolidation will take place some day, but until then the only recourse is for two or more counties to join together for such services. Unless they do, we are likely to see still fewer counties in this State with whole-time public health service."—*Ledger-Advance, Windsor.*

Too Many Duties

TWENTY-SEVEN violent deaths were chalked up in the two Carolinas over the week-end. That only thirteen of them were due to automobile accidents is the exception rather than the rule.

The automobile accident is becoming rapidly a leading cause of death to compare favorably (if such a term is appropriate) with cancer, pneumonia, and liquorized kidneys.

The State of North Carolina spends vast sums annually for the support of the State Board of Health to preserve the physical well-being of its inhabitants, and to the credit of the State Board of Health let it be said that it has been highly successful in many branches of endeavor. Typhoid and smallpox virtually have been stamped out. They are almost as rare as leprosy. Tuberculosis has been robbed of its ghastly toll and relegated to a comparatively inconspicuous position among the killers.

Battle against automobile fatalities has been waged by the State of North Carolina, not through the Board of Health, but through the Highway

Commission and the Revenue Department by means of the State Patrol.

It is not intelligent to say that the State Patrol has been a failure, because we do not know how much more dangerous the highways would be if it were not for the State Patrol.

But as long as automobile accidents continue to take human life at their present rate, the Patrol cannot be called a success.

We cannot see that it will ever be a success as long as the agency which directs it orders it to divide its duties between the protection of life on the highways, collection of revenue, and breaking up strikes.

The Patrol was created solely for protection of life and limb against motor vehicle accidents on State-maintained highways. Its use as a collection agency and its use as a State police force is in contrary opposition to its true purpose.

Unless the Revenue Department can allow the State Patrol to function solely as a life protection agency, control of the Patrol should be transferred to the State Board of Health. —*Fayetteville Observer.*

Here Is a Part of the Record

(North Carolina Bureau of Vital Statistics, Provisional Report for 1933)

	1933†	1932
Total number deaths.....	30,566	31,000
Death rate.....	9.3	9.6
Total number births.....	75,770	77,880
Birth rate.....	23.2	24.0
Infant deaths (under one year).....	4,982	5,173
*Infant mortality rate.....	65.8	66.4
Maternal deaths.....	505	555
*Maternal mortality rate.....	6.7	7.1
	Number Rate	Number Rate
Typhoid and paratyphoid fever.....	129 3.9	158 4.9
Endemic typhus fever.....	5 0.2	3 0.09
Undulant fever.....	4 0.1	2 0.06
Smallpox.....	0 -----	0 -----
Measles.....	84 2.6	60 1.8
Scarlet fever.....	45 1.4	32 1.0
Whooping-cough.....	197 6.0	240 7.4
Diphtheria.....	198 6.1	165 5.1
Influenza.....	941 28.8	783 24.1
Acute poliomyelitis and polioencephalitis.....	12 0.4	22 0.7
Epidemic cerebrospinal meningitis.....	9 0.3	18 0.6
Rabies.....	4 0.1	3 0.09
Tetanus.....	24 0.7	26 0.8
Tuberculosis, pulmonary.....	1,922 59.0	2,018 62.2
Tuberculosis, other forms.....	181 5.5	182 5.6
Syphilis, locomotor ataxia, paresis.....	237 7.2	320 10.0
Malaria.....	42 1.3	54 1.7
Cancer, all forms.....	1,637 50.0	1,652 51.0
Diabetes mellitus.....	349 10.7	399 12.3
Pellagra.....	386 11.8	474 14.6
Pneumonia, all forms.....	2,123 64.9	2,532 78.1
Diarrhea and enteritis (under 2 years).....	687 21.0	647 19.9
Appendicitis.....	301 9.2	308 9.5
Puerperal septicemia.....	115 {	107 {
Other puerperal diseases.....	390 } 6.7	448 } 7.1
Suicide.....	254 7.8	286 8.8
Homicide.....	388 11.9	388 12.0

PREVENTABLE ACCIDENTS

Automobile accidents, primary.....	685	20.9	565	17.4
Automobile and railroad collisions.....	40	1.2	39	1.2
Other railroad accidents.....	102	3.1	96	3.0
Air transportation accidents.....	13	0.4	7	0.2
Accidental drowning.....	185	5.7	156	4.8
Conflagration and accidental burns.....	153	4.5	215	6.6
Accidental traumatism by firearms.....	94	2.9	102	3.1

* Infant and maternal rates (per 1,000 live births).

† 1933 figures provisional.

TYPHOID FEVER

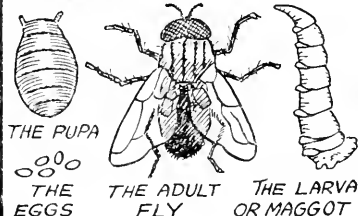
AND HOW DISEASE GERMS
ARE CARRIED -

POLLUTED WATER
IMPURE MILK
UNCLEAN FOOD
UNWASHED HANDS
FLIES



BY THESE PATHS TYPHOID GERMS REACH THE MOUTH. IN EACH COMMUNITY THESE PATHS SHOULD BE BLOCKED.

"SWAT THE FLY"

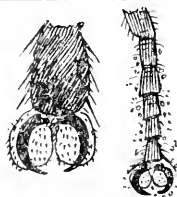


THE PUPA

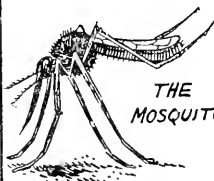
THE
EGGS

THE ADULT
FLY

THE LARVA
OR MAGGOT



THE LEG AND FOOT OF A FLY AS SEEN UNDER A MICROSCOPE. ON THEIR LEGS AND FEET FLIES OFTEN CARRY THOUSANDS OF GERMS.



THE
MOSQUITO

THE MOSQUITO IS AN AGENT FOR MALARIA.

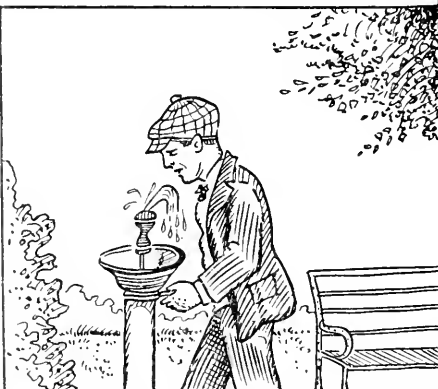
THE FLY AND MOSQUITO.
THE DISEASE CARRIERS.

EVERY HOME SHOULD HAVE THEIR WINDOWS AND DOORS SCREENED, BUT THE BEST WAY TO FIGHT FLIES IS TO KEEP THEM FROM BREEDING ABOUT OUR HOMES



A DRINKING CUP THAT HAD BEEN IN A SCHOOL FOR NINE DAYS WAS EXAMINED AND WAS ESTIMATED TO HAVE ON EACH SQUARE INCH OF ITS SURFACE 100,000 BACTERIA.

DO NOT DRINK OUT OF GLASSES OR CUPS THAT OTHERS HAVE USED.



A SANITARY DRINKING FOUNTAIN.

WOODLIEFF

KEEP FLIES AWAY FROM BABIES

MR. JNO. G. BEARD,
CHAPEL HILL, N. C.



The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD OF HEALTH

This Bulletin will be sent free to any citizen of the State upon request.

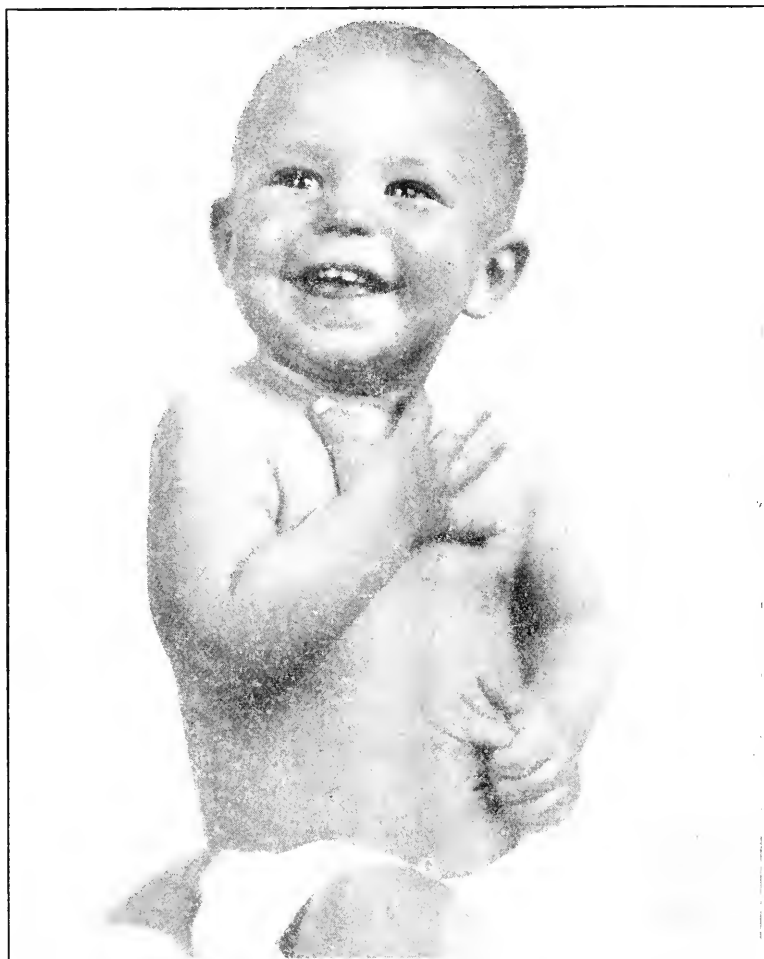
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MAY, 1934

No. 5

MASTER MUNFORD SCOTT JETER



Son of Mr. and Mrs. H. H. Jeter, Wilmington. Dr. J. Buren Sidbury immunized this young gentleman against diphtheria and obtained his photograph for our front cover this month.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Scarlet Fever
Cancer	Health Education	Smallpox
Constipation	Hookworm Disease	Teeth
Chickenpox	Infantile Paralysis	Tuberculosis
Diabetes	Influenza	Tuberculosis Placards
Diphtheria	Malaria	Typhoid Fever
Don't Spit Placards	Measles	Typhoid Placards
Eyes	Pellagra	Veneral Diseases
Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough
	Sanitary Privies	

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine	5 to 6 months; 7, 8, and 9 months; 10,
monthly letters)	11, and 12 months; 1 year to 19 months;
Minimum Standards of Prenatal Care	19 months to 2 years.
Breast Feeding	Diet List: 9 to 12 months; 12 to 15
Infant Care. The Prevention of	months; 15 to 24 months; 2 to 3
Infantile Diarrhea.	years; 3 to 6 years.
Table of Heights and Weights	Instructions for North Carolina Midwives.

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Notes and Comment

AS we begin preparation for the material to be published in the May HEALTH BULLETIN, we have before us the provisional death reports from the Vital Statistics Department for the month of February. On closely examining the report and summarizing it all, we feel like putting on sackcloth and ashes and going out into the wilderness for a siege. It is one of the most discouraging reports we have tabulated here of any month since the terrible influenza epidemics of a few years ago. As the cold figures speak louder than anything we can say, we want you to look at the tabulation which we quote for you right here:

	1933	1934
Infant deaths (under one year)	432	528
Measles	8	47
Whooping cough	10	24
Diphtheria	7	25
Syphilis, locomotor ataxia, paresis.....	14	29
Pellagra	17	26
Pneumonia, all forms	255	483

We hope that our readers will study these figures and what they mean for the people of this State. The North Carolina State Board of Health has always made it a point to place the facts before the people with reference to the presence or absence of preventable disease in this State. If the situation looks good, we take pride in passing it along; if the situation is bad, and if the facts are discouraging, we pass them along just the same.

Doctor Parrott, State Health Officer, has an expression which he frequently uses in his correspondence

and in his public addresses, and that is the reference to "your State Board of Health." The State Board of Health is literally the agency of the people of the State. It belongs to all the people, and at this time all the people in the State who eat are taxpayers. It is true, the winter has been an exceedingly hard one. There has been much cold weather, which means more suffering, relatively speaking, in this latitude than the same degree of increase in cold weather in a more northern latitude.

You will note from the foregoing figures that there were nearly four times as many deaths from diphtheria, nearly double the deaths from pneumonia, and a large increase in the number of deaths from pellagra. Measles caused the death of more than five times as many people as it did in February last year. The particular item, however, which most concerns us here in this editorial is the figure with reference to the infant deaths under one year of age.

As we have repeatedly stated in these columns and elsewhere, the infant death rate in North Carolina has for a long time been entirely too high. There is no practical explanation which can be offered for this state of affairs. There are many causes which contribute to it, and one person's guess is as good as another. We do know, however, there are a number of causes which contribute to this high death rate. One is the low income per family in North Carolina. The last United States census report which we have been able to examine was some three or four

years ago, when there were only five states having a lower per family income than North Carolina.

We have some multi-millionaires in this State—used to have, at least. We have been advertised to the whole wide world as paying more taxes to the Federal Government than any other state in the Union, except New York. The news of J. B. Duke's success in the field of tobacco and power monopoly, culminating in his establishment of the great Duke Foundation with its educational and hospital and other benevolences, which have been told around the earth every day for several years, has somehow established in the minds of the people of the country generally that North Carolina is a State composed of wealthy people. Nothing is farther from the truth. With the exception of a very few counties, in which large landowners carry on great farming operations, this State is comprised for the most part of small homeowners, small farm-owners, and entirely too many tenants of both classes and both races. In years of depression and hardship these classes suffer acutely. It is reflected in the deaths of babies, because being a baby is still a hazardous occupation, particularly when the family does not have sufficient income to provide for the essential creature comforts which every baby requires.

Even the foregoing does not explain our high infant death rate. We think, again, that ignorance and indifference on the part of parents has a great deal to do with it. Safe milk, pure water, and the essential foods which babies require are not provided. With our State system of good roads, families pick up and travel around from one section of the State to the other over the week-end; contagious diseases are therefore much harder to control, and such communicable diseases as measles and whooping cough, which are especially fatal to very young infants, are easily carried around and distributed throughout the State, despite all the efforts of quarantine officials and health departments, State or local.

We have not had time to tabulate the exact ages at which these 528 babies died, beyond the simple statement that they were all under one year of age. In 1932, however, 5,173 babies died under one year of age, and of that number 1,209 died before living out the first day; that is, they were under twenty-four hours old at the time of death. Twenty-four hundred and twenty-four of the number, which, as you may note, is about 48 per cent, died before they were thirteen days old. Undoubtedly many of these babies died on account of such diseases as syphilis, but a majority of them died for the simple lack of care of the mother during the prenatal period and during the confinement period. Nearly all of such deaths could have been prevented, and can be prevented in the future. It is to this cause in the month of May, the month in which the national celebration of Mother's Day and Child Health Day occurs, that we dedicate our efforts anew to try to stop this unnecessary slaughter of the innocents.

* * *

WE do not want to tire our readers by too much repetition of certain things so frequently repeated in THE HEALTH BULLETIN. For example, the question of a supply of safe milk in all sections of this State is one that we have been continually hammering away at. In the beginning of this item we want to request any reader who has plenty of fine, fresh, safe sweet milk available on the table every day in the year, and who does not know of any family within his or her range of acquaintance who does not have a plentiful supply of milk, to simply pass this item over and not waste time with it. On the other hand, if you do not have such an available supply, and if you know of any family in your acquaintance, whether friend, relative, or stranger, who does not have a plentiful supply of safe, rich, fresh milk daily, then we will ask you to read this item carefully and go out and see what you can do about it.

On an imaginary map on the walls

of our office we cannot help but refer every day to certain areas in North Carolina which we mentally term the "black areas," where it is as hard to secure palatable and safe fresh milk daily as it is to secure medicinal whiskey in a Raleigh drug store. Some of these sections just seem to us to be constitutionally opposed to having fresh milk around. It may be an innate dislike of a milk cow; but in such sections hogs are plentiful, and the cow being a much cleaner animal than a hog, it seems difficult to believe that that is the reason. One thing we know, and we repeat again, that no child can be reared properly, and good health standards maintained throughout infancy and childhood, unless a supply of fresh milk is available. Such children may appear healthy, they may appear normal, and now and then some of them may grow to maturity and live to old age in sound health, but such children are the exception rather than the rule.

In this connection we always bear in mind certain sections in eastern North Carolina. We have this view because we are familiar with the section from childhood, and we know that no section in the world is more suitable the year round for the raising of good milk cattle; and now, with good roads and easy transportation, there is no section in which it would be easier to supply a demand for fresh milk, if such demand could be created. We know also that a flourishing dairy industry with all the advantageous by-products always present in such an industry would contribute more to the general material upbuilding, and to the improvement in the health of young and old alike, than any other industry.

Physicians, generally speaking, and all informed laymen are familiar with the fact that in certain provinces of Italy pellagra was a scourge which attracted world-wide attention many years ago, and which became such a menace that the Italian Government took a hand in trying to remove the disease. No progress was

made at all until the area in which pellagra was such a scourge became transformed from a rice-growing section, a one-crop system, into a dairying and stock-raising country, which necessitated the raising of large quantities of legumes and other health-giving foods in order to balance their agriculture; and lo and behold! pellagra disappeared like the dew in the morning sun.

We cannot get away from the fact that it seems to be an "attitude" that generally prevails. To illustrate this point, we repeat the following little personal incident. In February we were compelled to spend a day in one of the best of North Carolina's eastern counties, a county composed of people whose intelligence is far above the average and whose economic condition is better than the average—in short, a genuinely fine county. The county-seat town is one of the most attractive in the State. We stopped at a good small hotel in the center of town for a hurried lunch that day. The weather was cold, we were weary, and a cup of coffee seemed necessary. The coffee came hot and steaming, along with a first-class, palatable lunch of good food well prepared; but with it a little thimbleful of oily condensed milk.

We never have stopped at any hotel in which the management seemed more eager to please and more friendly and accommodating. Therefore we made bold to ask if we might secure a little fresh milk or a little fresh cream for the coffee without too much trouble. The management said, "Yes, sir, we will have it here in a minute." Sure enough, in three or four minutes the young man, who was desk clerk, came slipping through the lobby into the dining-room with something hid under his coat. Naturally his actions attracted our attention as he made through the dining-room for the kitchen. As he stopped to open the dining-room door, we saw him surreptitiously remove a half-pint of milk. He had been to a near-by drug store and

secured this for our especial benefit, but he was ashamed to be seen on the streets of that town with a bottle of milk. Therefore we felt that he must have been unconsciously expressing the attitude generally prevailing. Anyhow, we got the milk, the coffee was good, the lunch was well worth the price, and everybody was eventually happy—and nobody caught the young clerk smuggling the milk in except us.

In justice to these fine folks in the eastern section, who handle milk as if it were poison, we feel that the reason must be, seriously speaking, the fact that milk is a fine culture media for such disease germs as those which caused frequent epidemics of typhoid fever, and even diphtheria and scarlet fever, in days easily within the memory of those of us who are not yet very far advanced toward old age. That time was when typhoid fever was present in every section of the State any month in the year. No family was immune, and, in fact, it was an exceptional family who grew to maturity without some member suffering death or the disastrous consequence of an attack of typhoid fever. It was well established then, as now, that milk and drinking water were frequently the source through which the contagion was conveyed. It is probable that this fact has something to do with the reluctance of people generally to use milk as freely as they would otherwise. Therefore, in any consideration of the milk supply, safety should be the first demand on the part of the public before consuming milk. This should especially apply to the milk provided for babies.

* * *

LAST month we called attention in this column to the yellow sweet potato, otherwise generally known as the Yam, as a source in palatable form of vitamin A. In this connection we mentioned the fact that it is said the white variety of sweet potato and the white Irish potato have little or no vitamin A. That was a story of the Yam. This is a story

about the Irish potato and the white sweet potato. While they contain little, if any, vitamin A, which promotes growth, prevents certain eye diseases, and also tends to prevent rickets, they do contain some of the most desirable and essential elements in any articles of food. This is especially true of the Irish potato. For example, Irish potatoes are rich in vitamin C. That is the vitamin which protects from such diseases as scurvy. They also contain vitamin B, which promotes growth in a manner similar to vitamin A. Vitamin B also is said to prevent various stomach and intestinal troubles, and, of course, these potatoes are exceedingly rich in starchy foods.

Owing to desirable food elements contained in so-called Irish potatoes particularly, it has come to be almost a universal food. This potato has fine keeping qualities, which allow it to be shipped long distances without damage or loss, and it probably comes as near being a universal food in the world today as any other one kind of food. Such men as Professor W. H. Brock, who published a most interesting journal, known as *The Healthy Home*, up in Massachusetts for more than twenty-five years, believes that the Irish potato is the most desirable item of food in the human diet. Mr. Brock has claimed on more than one occasion that he believes the Irish potato, when consumed daily in sufficient quantities, almost has the power to dissolve acids in the blood. The Irish potato has what is known as an alkaline ash residue. This is in contradistinction to such food as white bread or meat, which have what is called an acid-ash reaction. In other words, the margin of safety for people who are troubled with too much acid is increased by consuming more of such food as Irish potatoes and less of such food as bread and meat.

Naturally no one item of food is sufficient to maintain health in the human being over any great length of time. Everybody should avoid fads in food. And right here let us quote

what somebody said recently, and that is that a food faddist is someone who likes food that we don't. But the sense in which we are using the term "food faddist" here is the individual who insists on eating daily, over a period of months and years, a restricted diet consisting of only one or two items of food necessary to the maintenance of good average health.

Plenty has been said and written of the cause of pellagra in our section; so let us repeat here that the wise family will provide a variety assortment of food, frequently changed to conform to the seasons, but which always comprise plenty of protective foods. These are such foods as milk and all dairy products, eggs, some meat, bread, potatoes, and various other vegetables. For very young children, milk and calcium-containing foods, such as cheese, should be plentifully consumed. For adults well on in years, health may be maintained with little or no milk except in the cooking. Less calcium is needed, and a greater supply of such food as white potatoes and the more easily digestible forms of meat, such as poultry and fish, should be consumed.

In conclusion, let us repeat again that the various kinds of foods essential to the maintenance of good health are plentiful and within easy reach of every family in North Carolina. It is not necessary to go out of the State for any item of essential food if proper efforts are put forth.

NOTICE TO PHYSICIANS ABOUT TOXOID

Until further notice, diphtheria toxoid will be distributed to physicians without charge provided we are supplied with the names, ages, and addresses of children to whom it is administered. It is understood that no toxoid distributed in this manner will be given to children over ten years of age. It is advisable that children over six years of age be given the Schick test, and that toxoid be administered only to those

who have a positive reaction. Diphtheria toxin antitoxin is not distributed free. Its use is recommended only in those children who are more than ten years of age who have a positive Schick test. When diphtheria toxoid is ordered it is charged to the physician making the request. His account will be credited with eight cents for each name and address supplied and for such unused toxoid as he returns promptly and in good condition. Any differences between these credits and the original charge must be paid by the physician ordering the toxoid.

Orders should be sent direct to Dr. John H. Hamilton, Director, State Laboratory of Hygiene, Raleigh, North Carolina.

SOME FACTS WHICH OFTEN SURPRISE PARENTS

That a child does not necessarily have to have frequent temper tantrums.

That there are ways of training children to have their faces washed happily.

That children can learn to feed and dress themselves much earlier than they are allowed to.

That quarreling between children isn't so shocking as mothers sometimes believe.

That a child's wonderful imaginary stories are not lies.

That all well children can be taught to eat proper foods without having to be scolded.

That if scolding were dropped out of our language entirely, children could still be trained to behave well.

That spanking is not often necessary as a form of punishment.

That children can be taught to leave the books on the shelf and the food in the ice-box.

That children will write on large sheets of paper rather than on the walls and furniture if they are given the opportunity.—*Georgia Health Bulletin*.

Preventive Treatment of Measles

By J. BUREN SIDBURY, M.D., Wilmington, N. C.

MEASLES can be prevented by the injection of whole blood or convalescent serum. This, however, must be done soon after the exposure has taken place—the earlier the injection the more complete the protection.

The injection of blood should be given not later than five days after the child has been exposed to measles, although a later injection, as late as eight or ten days, may be given, but modified results are to be expected.

The method of procedure is a simple one and can be done by any practicing physician. It is necessary to use someone who has had measles. This is absolutely necessary. The more recently they have had measles the more effective will be the injection of blood. In most cases either the mother or father has had measles, and their blood is usually preferred.

With a 20 c.c. Luer syringe and an eighteen-gauge needle 40 to 50 c.c. of blood is withdrawn from the vein of the arm and immediately injected in the muscles of the child's buttock. Usually 20 to 25 c.c. of blood are injected in each side with only moderate discomfort to the child, and that is only of short duration. The mother is advised to put hot towels over the area for a short while to promote rapid absorption of the blood, as well as to prevent soreness of the buttock.

The procedure is harmless, it does not cause any reaction, and is effective in the control of measles.

In children under four years of age it is desirable to give complete protection from measles because of their susceptibility to complications, such as pneumonia, otitis media, mastoiditis, sinus infection, and nephritis.

In the older child it may be desired to have a modified case of measles, and this may be accomplished either by giving a smaller dose of blood, such as 20 to 25 c.c., or by waiting

until the eighth or tenth day of exposure before giving the blood. This injection will give a mild case, which will give the same immunity that is given by a regular case of measles. The child develops a mild case of measles and a permanent immunity. This is to be desired in the older child, because sooner or later he will probably be exposed without knowing this, and will have a case of measles which might not be modified.

Duration of Immunity

The immunity which is afforded by the injection of blood from the child's parent will last for from three to six weeks, after which time the child is just as susceptible as he was before getting the treatment.

However, this injection is effective in preventing certain institutional children or poorly nourished children who have had repeated respiratory infections from contracting measles at this particular time. Should this type of child be reexposed after four to six weeks, it will be a simple procedure to give another injection, which will give another four to six weeks of immunity and help the child past the epidemic in which he has found himself.

The poorly nourished child who has had a rather strenuous winter by having a number of infections should certainly be spared having measles, and especially since the remedy is so simple and easily applied.

About 60 per cent of the mortality following measles occurs in children under four years of age. When we realize that this mortality can be cut down tremendously by giving all children in this age group who have been exposed this simple injection of whole blood from the mother, we are certainly not doing our duty by these children if we do not give them the advantage of this prophylactic treatment. It is our duty as physicians to advise our parents to have this done,

and it is equally the duty of the parents to see that their child is given the advantage of this protection.

The public should be advised about this preventive treatment for measles. At the present time they are not informed in regard to its value. When the public has become sufficiently informed along this line, parents will demand that their children be given the advantage of this therapeutic measure. It is the duty of the family physician and the public health officer to broadcast this information to reduce our infant mortality. It can be done; it should be done. The remedy is simple, practical, and harmless.

Conclusions

1. Measles can be prevented or modified, as we wish, by the injection of whole blood.

2. The amount of blood should be 40 to 50 c.c., or one to two ounces. Less than this amount will not give the desired results.

3. The injection should be given within five days of exposure if complete protection is desired, or within eight to ten days if a modified case is to be expected.

4. Less than 30 c.c. or one ounce of blood, or longer than seven days exposure, will not yield complete protection.

5. The blood of anyone who has had measles may be used. The recent convalescent case is to be preferred.

6. If your baby is exposed to measles, call your doctor immediately, and ask his advice about giving this injection to prevent measles. Be on the safe side.

Argyria

By ALBERT SMEDES ROOT, M.D.

THE most common infection among all classes of people is the common "cold." The most common method of treatment is the use of "nose drops." There are many drugs advertised and many prescriptions written by the physician for this purpose. Among the most popular of these are solutions of the salts of silver. When these silver salts are used over a long period of time there is apt to develop in certain children who are especially susceptible to the absorption of silver an abnormal condition of the skin and mucous membranes known as argyria.

The silver salts are instilled into their nostrils, swallowed, and some taken up by the blood and deposited in the skin and mucous membranes as metallic silver. The result is that if continued the skin gradually assumes an ashen, gray, ghastly hue, which is more or less permanent.

The chief offender is a preparation known as neo-silvol, which contains 20 per cent of silver iodide. Another

drug capable of producing argyria is argyrol. Neo-silvol is a milky-looking solution, which is clean and does not stain, hence nicer to use than argyrol. This may be the explanation of why few cases of argyrol argyria are seen, and why most of them come from using neo-silvol. During the past two or three years a number of children having this unnecessary affliction have been reported in the medical literature, practically all due to neo-silvol.

It has been only recently that physicians have realized the danger which might come from these drugs. Unfortunately, at times of stress such as we have been experiencing the past three years many patients have been unable to go to a physician for the milder respiratory infections. They have heard of these drugs, so purchase them from a druggist without directions for their use. They are often kept up for weeks or months in children who do not respond because of the fact that they either have en-

larged tonsils or adenoids or infected sinuses, or both conditions. We have seen three cases in Raleigh produced this way—and two others from a neighboring town.

Realizing the possible permanent disfigurement through life which these drugs may cause, we have communicated with all of the druggists here in Raleigh, requesting them not to fill prescriptions containing silver salts except upon a doctor's prescription. These men have shown a fine spirit of coöperation.

No possible damage could be done by using silver salts for a brief period of time—for instance, several

times daily for a week, or when applied locally by the physician; but it is their prolonged and frequent use and the individual susceptibility of the patient which is responsible for argyria.

The results obtained from this form of medication do not in the least justify their use. As a matter of fact, most upper respiratory infections (head colds) have to run their course, and their duration is not materially influenced by intra-nasal therapy.

The public should know and be warned about the danger of argyria caused by drugs.

Diphtheria Immunization

By J. C. Knox, Assistant Epidemiologist

THERE is no necessity of any child dying from diphtheria.

This rather strong statement probably needs some explanation. Of all the communicable diseases, none is better known by the medical profession as to the methods of treatment, control of spread, and prevention of its development. We should not cease our efforts until our knowledge is applied in such a manner that the morbidity and mortality statistics of this State show decreases which approach zero.

In compiling our records of the reported cases of the various communicable diseases we have learned much, much which previously we have only surmised. With such figures at hand, we have knowledge which aids much in a more intelligent handling of problems dealing with successful control of these diseases.

We have known for a great many years that there is a very definite seasonal variation in some diseases, and while we are not able to determine the reasons for such variation, we accept it as a fact. Why one disease should be more prevalent in the fall, while another is in the spring, we know not. The knowledge that

this is true is valuable, and much use can be made of it. There may be no such variation in some diseases.

It is also true that diseases have other characteristics which are peculiar to them; for example, there may be a prevalence in respect to age, sex, race, or occupation. Also, a disease may affect either rural or urban population to greater extent. Some may have the peculiarity of occurring in epidemics, others not. Certain of them come in cycles, while others do not show this variation.

It is only by the studies of such characteristics of the various diseases that we are able to cope with them in the most effective manner. In addition to these peculiarities, we desire to know the causative agent, the mode of infection, the clinical course of the disease, the method of transmission to others, and what protection one attack gives to an individual.

In diphtheria we have a very complete knowledge of the causative agent, the site of invasion, mode of transmission, clinical course, age incidence, and seasonal prevalence. In addition to this, we have a test for susceptibility, a powerful curative serum, and an agent which will give protection against the dire results of

the infection, when it is administered properly and in sufficient time to allow immunity to develop.

Not all individuals are susceptible to diphtheria. Infants up to the age of six months do not develop diphtheria, as a rule. This immunity, however, is dependent upon whether or not the mother has any protective bodies in her blood which are there by reason of a previous attack of the disease, or natural immunity. If she has such bodies, then this protection is conferred upon the baby for this period of time. After six months of age there is usually an increase in susceptibility to the disease, which begins to decrease again after the child reaches the age of seven or eight years. If natural immunity begins at eight to ten years, that child may never develop the diphtheria unless there is an unusually heavy exposure. There are a few fortunate individuals who remain immune from birth throughout their life span. There are people who are always susceptible to diphtheria and may develop the disease at any time in life, when sufficient exposure has taken place. Diphtheria is, therefore, primarily a disease of children. It is indeed fortunate that we have a means of testing one's susceptibility to the infection, and more so that we have a means of giving to such an individual protection by administering one of the preparations known as toxoid or toxin antitoxin. The toxoid has almost entirely supplanted the use of the toxin antitoxin mixture for this purpose.

The most logical time for giving this protection to the child is at the age at which susceptibility begins to show itself, and that is, as a rule, at six months of age. If all infants could receive one of the immunizing agents at this time, with a test for susceptibility following its administration, it is possible that diphtheria could be entirely eradicated. Certainly this should be the goal at which we aim. It is at this age in a child's life when we must give our most careful attention if we are to achieve this goal.

Our records for the past five years for the State as a whole show that of all the reported cases of diphtheria approximately 53 per cent occur in children before they reach school age. Furthermore, deaths in this age group amount to 86 per cent of the total deaths from this cause. It is the younger child, then, who is most in need of this protection.

The various health organizations and the schools have been constantly reminding parents of their duty to the child before he starts school, especially with reference to the various protective measures against communicable diseases. This is as it should be, but as we see from our figures, immunization should be given the child early enough to protect the greatest number. It therefore becomes the duty of the parent to see that his baby is protected to the extent of our knowledge. In the past five years 1,187 individuals have died from diphtheria. Of this number 1,023 were under six years of age. Do not these figures speak strongly enough to awaken us to the need of our greatest efforts to eliminate diphtheria from our midst?

The greatest number of cases of diphtheria occur in the fall months, usually the peak being in October or November. This is the season at which colds and sore throats are probably most prevalent, and since diphtheria may be mistaken for an ordinary sore throat, it is therefore treacherous, inasmuch as a parent might be led to believe it is only a simple sore throat and requires only home treatment. Once the disease has developed, the child should be under the care of a competent physician. Delay can be most serious, for the effectiveness of the antitoxin decreases very rapidly with each passing day after the onset of the disease. Those children treated within the first three days after development of the disease have a splendid chance of recovery without any ill effects.

On the other hand, antitoxin given late in the disease may be entirely worthless. Would it not be better

for each parent to know that his child is protected from diphtheria, as shown by the Schick test, than to have the anxiety and fear that is attendant upon any little cold or hoarseness or fever that might occur at this season of the year? I am not speaking of the impossible, for if sufficient interest is aroused, the parents can have the assurance that this "sore throat" or this "hoarseness" is not due to diphtheria.

Diphtheria toxoid, the immunizing agent, is manufactured now in two forms: one which is given in two doses and one which is given in one dose. Of course, it is necessary that a child receive this material by injection with a needle, but there is so little discomfort attached to the process that there should be no hesitancy in having it given. A child cannot be given diphtheria by taking the toxoid. It is true that toxoid will be of no value if the child is exposed to diphtheria before the immunity is set up. This protection occurs in from

six weeks to four months after administration of the toxoid.

Since diphtheria is a disease of infants and young children and occurs in the colder months, and since the development of immunity requires from one to four months, it is at this time that we call attention to the necessity of having your child immunized by your family doctor within the next month or two. Do not delay in this most important matter; see your family doctor and have this immunity assured in your child. This assurance comes with a negative Schick test following administration of the toxoid, and should be of primary importance to each parent. Physicians are perfectly willing and are desirous of protecting your child from diphtheria; however, they cannot go out into the highways and byways to gather in the susceptible children for immunization. It is the responsibility of you parents to see that your child is protected. How are you going to meet that responsibility?

Group of Practicing Physicians Recommend Minimum Standards for Prenatal and Postnatal Care

IN the autumn of 1933 the State Board of Health, through the division of Maternal and Infant Hygiene, invited a few representative physicians, mostly those practicing in the small cities and country towns of the State, to meet with a representative of the Board in a few informal sectional conferences. Twelve of these small group meetings were held. The attendance was generally between a half-dozen in the smallest to twenty-five in the largest. Each group was asked to elect from their number a "delegate" to come to Raleigh later for a general all-State conference. The purpose of these conferences was to discuss the present and past high infant and maternal death rate in North Carolina, and to try to find a method which could be applied in a practical manner throughout the State which

would solve this problem. The sectional meetings in the fall developed a great deal of interest on the part of all participating physicians.

The central conference was held in Raleigh, March 26th. Every group with only one exception was represented. Dr. Isaac H. Manning, president of the North Carolina Medical Society, presided, and a full day of hard work was devoted to the subject. Every phase of the medical care of mothers, prospective and actual, and of babies was studied. The conference was asked to set forth what practicing physicians might term minimum standards of safety for every prospective mother to follow. A committee was appointed to write out some "rules of safety" to be followed. This committee was composed of Drs. H. H. Johnson, chairman, Louisburg; J. Street Brew-

er. Roseboro; Forest M. Houser, Cherryville; Thos. Leslie Lee, Kingston.

Their report follows:

GENERAL PRINCIPLES OF PRE-NATAL CARE

Every Woman Should Consult a Physician As Soon As She thinks Herself Pregnant

I. a. General Physical Examination to be made before the fourth month of pregnancy.

1. History of previous pregnancies and diseases.
2. General examination:
 - (1) Foci of infection
 - (2) Heart and lungs
 - (3) Abdomen
 - (4) Extremities
3. Blood examination, to include Wassermann in all cases, hemoglobin in all cases, blood count desirable.

b. Pelvic Examination.

1. Pelvic measurements to be taken before fifth month.
2. Vaginal examination to be made before fifth month.

II. Routine Visits to Physicians.

1. Should visit physician once a month for first five months and twice a month thereafter, at which time following examinations should be made:
 - (1) Urinalyses
 - Specific gravity
 - Albumen
 - Sugar
 - Microscopic examination desirable.
 - (2) Blood pressure determination.
 - (3) Weight—Gain of over 24 lbs. not desirable. Any rapid gain to be looked upon with suspicion.
 - (4) Estimation of height of uterus.
 - (5) Determination of fetal heart sounds.
 - (6) Diagnosis of presentation and position of fetus.

III. General Instructions.

1. **Rest**—One hour after mid-day meal, two hours desirable.
2. **Exercise**—Walk at least one mile daily.
3. **Diet**—General well-balanced, nourishing diet, with abundance of milk, vegetables, fruit and fruit juices.
4. **Medication** — No medicines (laxatives included) shall be taken except upon instruction of the physician.
5. Either supply or have patient write for various pamphlets and literature issued by the State Board of Health and the Children's Bureau of the U. S. Department of Labor.

IV. Special Instructions.

Report at once to your physician if any of the following symptoms appear: Headache, dizziness, spots before the eyes, swelling of the feet and ankles or face, frequent or painful urination, bleeding or abdominal pain.

POSTNATAL CARE

- I. Physician should visit patient not later than third day after labor, at which time patient should be advised regarding:

- a. Nursing or feeding baby
- b. Posture and exercises to prevent uterine displacements
- c. When to get out of bed and resume usual activities.

- II. Six weeks after delivery patient should report to physician for vaginal examination to determine and correct ulcerations and displacements.

- III. Baby should be examined at this time for weight and dietary corrections unless under care of pediatrician.

In addition to the above-named physicians composing the committee, Dr. Manning, and the medical staff of the State Board of Health, the following practicing physicians generously contributed their time and

labor to this epoch-making conference:

Drs. Verne H. Blackwelder, Lenoir
F. H. Garriss, Lewiston
John D. Robinson, Wallace
S. C. Spoon, Burlington
C. F. Lambert, Spruce Pine
Eva F. Dodge, Winston-Salem
Grover Wilkes, Sylva

Drs. H. T. Aydlett, Greensboro
N. C. Daniel, Oxford
C. B. Williams, Elizabeth City
Ben Gold, Shelby

We hope every prospective mother in our State may read the recommendations of this committee and in some way arrange to adopt the advice offered.

Doctor, What Toothpaste and Mouth Wash Do You Recommend?

By WALLACE F. MUSTIAN, D.D.S., M.S.D., Warrenton, N. C.

DOCTOR, what toothpaste and mouth wash do you recommend? This inquiry is frequently made of the dentist by his patients. It cannot be intelligently answered without some explanation.

There is a great deal of misunderstanding at present regarding the various claims of the numerous toothpaste manufacturers as to the supposedly mystic and miraculous virtues of their products. The number of mouth washes and toothpastes available to the public is so great that a condition of utter confusion exists. What mouth wash, if any, should a person use, and what might be expected in the way of improvement in mouth conditions attending its use, is a vital dental question. At the outset it may be said that the mouth of the normal individual does not show a need for any of the numerous medicated mouth washes available on the market.

A thorough brushing of the teeth twice or three times daily, preferably with a dentifrice, and followed by a thorough, vigorous rinsing of the mouth with warm water, seems to offer all the elements necessary in the daily mouth hygiene of the ordinary person.

Dentists know from theoretical training, clinical observation, and common sense that there is no magic liquid or paste so powerful which will attain the results claimed by many manufacturers. We know that all any dentifrice can do is to clean

and polish the teeth, and all that any mouth wash can do is to flush or wash out the oral cavity. Other benefits claimed are negligible, besides the mechanical stimulation produced by the brush. Even this cannot be accomplished without much elbow grease and its proper method of application.

A mouth wash can be considered to serve no more intensive purpose than to aid in the mouth toilet in the removal of loose food and débris. As far as its germicidal effect in the mouth is concerned, there is no evidence that mouth washes do anything more than cause a temporary decrease in the number of bacteria in the mouth.

An ideal solution for rinsing of the mouth may be prepared by the addition of one-half a level teaspoonful of common table salt (or just a pinch) to an ordinary drinking glass of warm water. This simple solution is recommended by different dental colleges in the United States as a mouth wash which answers all the requirements of a daily mouth rinse.

Common precipitated chalk and castile soap is an ideal dentifrice and contains all the essential elements to clean and polish the teeth. Precipitated chalk and castile soap are the basic elements of the majority of commercial toothpastes and powders. Other elements added, such as acid, flavoring, glycerine, water, and certain drugs, are non-essential or even harmful.

Milk Sanitation In North Carolina

By WARREN H. BOOKER, *Director, Division of Sanitary Engineering*

MILK sanitation, like the economic recovery, is on its way. And, like our recovery, it may not have gone as far as many of us would like to see it go, but at the same time we are certain that it is moving, and moving in the right direction. Here are some very pertinent facts.

The U. S. Public Health Service recently published a list of the cities and towns of the Nation having a municipal milk rating, based on the Public Health Service Milk Ordinance, of 90 per cent or more. This list might be called an "Honor Roll." On this list, or Honor Roll, North Carolina was represented by 24 cities and towns. Only one other state had a greater number of cities and towns on this Honor Roll than North Carolina. That State was Alabama, which had 27 towns represented.

While apologies are rarely in order, we cannot refrain from adding that this list of 24 towns was taken from those rated in 1932 and a list of only 42 towns rated last year. While North Carolina has 97 towns operating under the Public Health Service Milk Ordinance, on account of lack of men and means, and an overwhelming amount of work, we were able to rate only 42 of our 97 ordinance towns during 1933. Had we been able to rate the remaining 55 towns we feel confident that the result would have been different. Those cities and towns making the Honor Roll are shown in black-face type on the accompanying table.

As proof that milk sanitation is definitely on the up-grade in North Carolina, it is necessary to note that the general rating improved in 23 towns in 1933, as compared with the ratings of the same towns in 1932. At the same time the general rating decreased in only nine towns. That represents improvement in 72 per cent and retrogression in 28 per cent of our towns.

Many North Carolinians do not use enough milk and milk products in their daily diet. A pint of milk per day for adults and a quart per day for children under 16 is a very good rule. In the towns surveyed slightly less than one-half pint of milk per capita per day was used last year. But an encouraging feature is that even this represents approximately a 5½ per cent increase over 1932.

Another very interesting observation in connection with milk consumption is that in general in towns where milk sanitation is improving we find milk consumption increasing, and where milk sanitation is on the down-grade milk consumption also decreases. This general rule held good in approximately 63 per cent of the cities and towns last year.

A very gratifying feature about milk sanitation in North Carolina is the fact that we now have some 97 municipalities operating under the Public Health Service Milk Ordinance. Texas is the only other State having more milk ordinance towns than North Carolina. While Texas has around 117 ordinance towns to North Carolina's 97, it should be borne in mind that Texas had 202 towns in 1930 having a population of over 2,000, while our State had only 85 towns of over 2,000 population.

The accompanying table lists the 42 cities and towns surveyed in 1933, together with those surveyed in 1932 which made the Honor Roll. In columns 2 and 3 are shown the average daily per capita milk consumption in pints for 1932 and 1933. In columns 4 and 5 are shown the raw milk ratings for 1932 and 1933. In columns 6 and 7 the pasteurized milk ratings, and in the last two columns the enforcement ratings in the various towns.

While nearly 100 towns are operating under practically the same ordinance in this State by reason of the

fact that this milk sanitation work is carried on by some 60 inspectors in the various towns, it is one of the policies of the Public Health Service to endeavor, through the State Board of Health, to make the enforcement as uniform as possible throughout the State and Nation. To this end, so far as possible, annual milk rat-

ings will be made. Such ratings not only unify the work, but they also indicate to the general public how the milk sanitation in their towns compares with that of other towns and other states. To this end, and to the end that more and safer and cleaner milk may be had in North Carolina, the accompanying table is given.

U. S. PUBLIC HEALTH SERVICE MILK RATINGS IN 1932 AND 1933

Name of City	Daily Consumption		Retail Raw Rating—%		Pasteurized Milk Rating		Enforcement Rating—%	
	1932	1933	1932	1933	1932	1933	1932	1933
Albemarle.....	0.81*	0.69	92.7*	92	....	....	....	92
Angier.....	....	0.11	....	65	....	....	....	†
Apex.....	....	0.19	....	97	....	....	....	98
Asheville.....	0.83	0.41	94	87	92	77	94	64
Beaufort.....	....	0.22	....	96	....	....	....	....
Burlington.....	0.76	0.58	79	95	82	79	94	87
Canton.....	0.43	0.50	86	98	....	....	94	96
Cary.....	....	0.22	....	88	....	....	....	98
Clinton.....	0.36	0.35	61.9	80	....	....	....	88
Coats.....	....	0.43	....	97	....	....	....	†
Dunn.....	....	0.19	....	95	....	....	....	†
Durham.....	0.48	....	92	....	96.0	....	97	....
Elkin.....	0.40	0.51	88	93	72	....	73	93
Erwin.....	....	0.16	....	95	....	....	....	†
Farmville.....	0.36	0.44	78	69	....	....	61	69
Fayetteville.....	0.36	0.43	75	95	....	81	66	98
Granite Falls.....	0.25	0.45	76.5	92	....	....	64	83
Greensboro.....	0.50	0.45	80	91	82	85	83	76
Greenville.....	0.36	0.30	77	71	....	....	70	65
Hamlet.....	0.29	0.39	55	95	....	....	47	97
Henderson.....	0.26	0.28	87	55	....	....	94	73
Hendersonville.....	0.77	0.68	89	97	93	93	98	98
Hickory.....	0.52	0.59	90	94	82	86	95	93
High Point.....	0.31	0.38	82	95	83	94	95	95
Hope Mills‡.....	....	0.16	....	99.5	....	....	....	98
Kinston.....	0.26	0.35	89	85	....	....	44	79
Leaksville.....	1.60	1.90	93	97	74	72	84	90
Lenoir.....	0.38	0.47	68	95	....	....	63	91
Lexington.....	0.44	0.35	83	88	75	80	79	79
Lillington.....	....	0.32	....	85	....	....	....	†
Manteo.....	0.37	0.59	62	94	....	....	87	87
Monroe.....	....	0.46	....	47	....	....	....	†
Morehead City.....	0.20	0.28	57	93	....	....	62	96
Mount Airy.....	0.29	0.28	91	99	....	....	80	98
Oxford.....	0.27	0.46	90	86	....	....	97	93
Raleigh.....	....	0.46	....	96	....	88	....	97
Reidsville.....	0.43	0.44	90	78	74	....	82	42
Rockingham.....	0.82	0.62	53	93	....	....	....	98
Rocky Mount.....	0.23	0.26	85	96	77	71	73	98
Sanford.....	0.41	....	92	....	....	....	99	....
Statesville.....	0.31	0.28	88	85	....	....	95	65
Thomasville.....	0.19	0.20	72	90	89	93	72	85
Tryon.....	0.47	0.58	81	84	....	....	84	59
Waynesville.....	0.43	0.48	86	96	....	....	95	97
Whiteville.....	0.36	0.49	40	79	....	....	22	42
Wilkesboro.....	0.24	....	93	....	....	....	98	....
Winston-Salem.....	0.30	0.34	83	92	79	94	89	93

* 1931 Rating—No survey in 1932. † Initial Survey. ‡ In Fayetteville in 1932.



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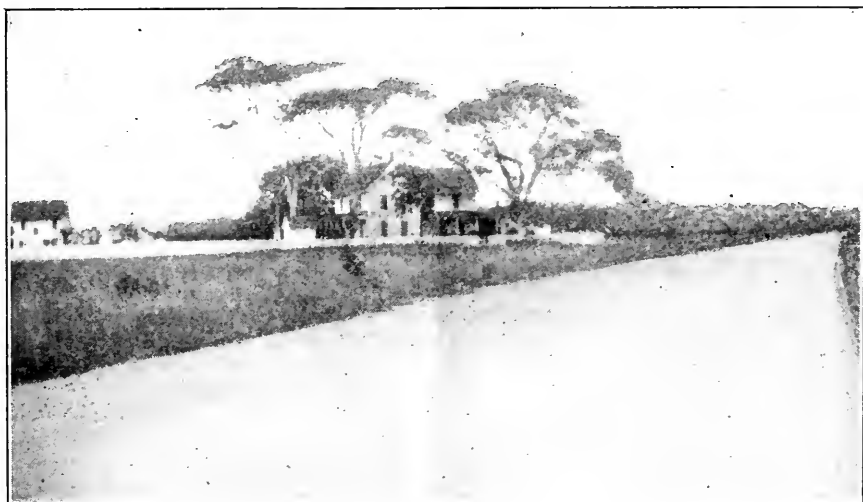
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No. 6

VACATION TIME



This picturesque old place in Wanchese, Roanoke Island, in a section saturated with the early history of America, is an illustration of what the eastern coast of North Carolina has to offer the person with time and means for a vacation this summer.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Scarlet Fever
Cancer	Health Education	Smallpox
Constipation	Hookworm Disease	Teeth
Chickenpox	Infantile Paralysis	Tuberculosis
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Don't Spit Placards	Measles	Typhoid Placards
Eyes	Pellagra	Venereal Diseases
Flies	Residential Sewage	Water Supplies
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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine	5 to 6 months; 7, 8, and 9 months; 10,
monthly letters)	11, and 12 months; 1 year to 19 months;
Minimum Standards of Prenatal Care	19 months to 2 years.
Breast Feeding	Diet List: 9 to 12 months; 12 to 15
Infant Care. The Prevention of	months; 15 to 24 months; 2 to 3
Infantile Diarrhea.	years; 3 to 6 years.
Table of Heights and Weights	Instructions for North Carolina Midwives.

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Notes and Comment

VACATION time is here again. The one question that it seems more people ask at this time of year than any other is, What shall we do with the children during vacation from school? The answers are almost as numerous as the families concerned, with the exception of two classes of people. First, the small farmers, including the large number of tenants of both races who make their living farming and who largely depend on the labor of the children of the family for the cultivation and harvesting of the crops. The program is already arranged for the children before school closes in the spring. The fact is, it is almost predestined, so to speak, from before the birth of these children. The minute they get out of school they have to take their places in the fields along with the adult workers. For these children, generally speaking, it is a case of entirely too much work to the neglect of certain forms of recreation and play necessary to the happiness of all growing children, and to their proper physical growth.

The other class having their program already arranged is much fewer in number. They are the children of the wealthier people living in the cities and towns, who patronize the various summer camps on the seacoast or in the western section of the State. For the most part, it may be said for these children to be a case of rather too much play and too much recreation for their best interest. While it is fine for their physical development and growth, they are for the most part neglecting to acquire

familiarity with some useful vocation which may be necessary to keep them off the public welfare departments sometime in the distant future.

There is another large class, however, of families having children that do not fall within either of the foregoing classifications. That group of people embraces the large number of families in moderate circumstances, living in the cities and towns and villages, in which the parents are working people, or professional people, or white-collar workers, in which the problem of vacation is a real one. The only recreation that the majority of such children may find is out on the streets or congregating around the public swimming pools or roving around trespassing on suburban property, none of which is good for the children.

Such adolescent children of teen age should have some useful occupation provided for them for a part of their time every day during the summer months, allowing for plenty of time for play and recreation, which should be organized or directed in order to assure activities in clean sports, away from sordid surroundings. There should be a fine, well-developed vacant lot for baseball within easy reach of every boy; tennis grounds should be provided for boys and girls; there should not be too much loitering around polluted swimming pools and in association with the poolroom type of loafers. Such children, when possible, should be encouraged to cultivate a small garden plot, if it is not more than ten square feet. They should plant

their own seeds, cultivate, and be responsible for it, and so encourage and acquire familiarity with a useful occupation that may help them a great deal in later life.

The little odd jobs which children can do around home should be made into a daily routine and should be just as regularly done as the adults of the family do their work. The older group of boys should be kept away from poolrooms and billiard halls at all hazards. Children should be encouraged to take daytime trips in the near-by suburbs, under the chaperonage of thoroughly dependable older boys, such as scout masters or young teachers on vacation. Girls should be encouraged in the same way. There should be object lessons, such as nature study of birds, flowers, trees, crops, and so on. In fact, the play activities of the children through the summer months should be according to a program, dividing time with their work activities, all of which should be as carefully arranged as the parents provide for their own occupation and daily labors.

It is realized that it is a much easier matter to write about these things and to offer advice than it is to carry them out. At the same time it is a well-known fact that much delinquency and crime in later life could be prevented by careful attention to such things during the growing period of boys and girls. In order to carry out any program satisfactorily, the parents must deny themselves some of their so-called pleasures. It is well to recall here the statement of Gladstone, the great English Prime Minister, that "selfishness is the greatest curse in the world." If parents of young children are too bent on their own pleasures, particularly in their hours off duty from their regular labors; if they are addicted to too much night living, seeking pleasures for themselves, the result upon their children's future can be very easily predicted. The question of a satisfactory and happy vacation for the children of a family

depends upon coöperation and sacrifice of the parents and upon developed community enterprises, which may be easily worked out in every community.

* * *

AS we are ready to go to press with the June issue of THE HEALTH BULLETIN one of our nurses, at present at work in a large, wealthy county not far from Raleigh, sends in her report of work done during the first week in May. The entire week's work was done in a large consolidated rural school, many miles from any town, and was in one of the most prosperous farming sections to be found anywhere in the eastern part of the State.

To begin with, let us state that this nurse was reared in Guilford County. We quote the following comment from the nurse's report:

"Until I started in this work I did not know that so many farm children do not have milk to drink. Out of 649 children examined, this week in this school, I find 126 more than 10 per cent under average weight for their age. Of the 126 in this fine farming section, not one drinks milk. I think lots of people must be ashamed to own a milk cow for some reason. I guess it is because we have always had so much milk at home makes it so hard for me to understand why so many farmers do not have any milk cows.

To prove that in other ways this is a fine, modern community, about half of these children had been immunized against diphtheria, smallpox, and typhoid fever. One year ago the dentist working for the State Department spent some time in this school; and therefore I find the teeth in much better condition than usual. The fact is that out of 649 children examined, only 122 of them had anything wrong with their teeth. This, you know, is a very fine percentage of children having sound teeth and good mouth conditions. I found also that, while a large number of them have bad throats, quite a few of the children had had tonsil operations done. There was a little larger percentage of children having eye troubles than usual. With the exception

of the utter lack of milk, the people in this community seem to have a wide variety of good food, and plenty of it."

We do not single this report out in particular, because it is very similar to reports that we get constantly from all sections of the eastern part of North Carolina; and by "eastern part" we mean east of a line drawn through Raleigh running north and south. The time will soon come, we predict, when this particular section will be aroused to the necessity for a larger per capita consumption of good, fresh cow's milk produced in the area and supplied to everybody, particularly the children; and when such a time comes, the health conditions in that section will not only be better and the infant death rate drop accordingly, but the section will be much more prosperous from a financial standpoint.

* * *

FOR a number of years we have been warning the readers of THE BULLETIN against the promiscuous use of various headache remedies. The one point that we have been most concerned about is the undesirability, from the standpoint of one's general health, of getting into the habit of taking a drug of any kind to excess; and also we have particularly advised against the habit of self-medication, which is vicious from every standpoint. We have also urged our readers to be on guard against the prescribing of drugs of any kind by teachers in the schools or other laymen who know nothing about the therapeutic or physiological action of drugs. We have inveighed against the habit of some teachers keeping ready-to-hand common drugs usually promiscuously taken for headaches. This may serve as one example.

Our reasons, as just mentioned, for this have been largely on the grounds of the undesirability of forming the drug habit, of self-medication, or of medication by the "Smart Alec" layman. We now find that we have another, and a strictly scientific reason, for warning our

readers against such habits. In a recent issue of the *Journal of the American Medical Association* a group of Los Angeles physicians published a report of a thorough investigation they have made with reference to the use of a group of chemically related medicines freely given to relieve pain. These physicians made their investigation in an endeavor to find out the cause of a constantly increasing number of cases of suffering from what has been up to recent years a very rare disease. They have found that this group of drugs used so frequently to relieve pain has had some effect on the bone marrow. It is in the bone marrow where some of the blood cells are formed which indicate the disease — not mentioned here for various reasons. The name of the drug they have reported on is pyramidon and the group of chemically related drugs. It is the conclusion of these doctors that this drug, either alone or in connection with other drugs, should never be used except on the direct prescription of a competent physician, and, even then, not unless a white blood cell count may be made several times a week while the drug is being administered.

We mention this in these columns because it gives us an opportunity again to warn against the promiscuous use of drugs of any character unless prescribed by a competent physician. The best way to deal with the patent medicine business is to leave it severely alone. It makes no difference how highly and widely advertised and how commonly prescribed across department store counters, it is never safe to gamble with one's own health in any such reckless manner. We repeat, if you have a case in court, you better see a lawyer; if there is anything the matter with you, you better see a good doctor.

Pellagra is again increasing. In April this year 39 deaths occurred against only 25 in April, 1933.

Maternal Mortality In North Carolina

(SECOND REPORT)

By JOHN H. HAMILTON, M.D., D. F. MILAM, M.D., R. T. STIMPSON, M.D.

From the Bureau of Vital Statistics, North Carolina State Board of Health

[Paper presented at the Health Officers' Association meeting at Pinehurst, April 30]

IN a preliminary report submitted last year, attention was called to the number of women who die in North Carolina each year while performing that most important function of bringing forth new life. The high maternal mortality rate for this State was noted. A report from the Bureau of the Census of the U. S. Department of Commerce, for the year 1931, showed that there were only seven states in the Union with higher maternal mortality rates than North Carolina. These are: Alabama, Arizona, Florida, Georgia, Louisiana, Nevada, South Carolina; and only five states, Alabama, Florida, Georgia, Louisiana, and South Carolina, with higher white rates than North Carolina. According to this report, there were only five states, Florida, Georgia, Oklahoma, South Carolina, and Tennessee, with higher Negro rates than North Carolina.

The preliminary report showed toxemias of pregnancy as the outstanding cause of death in this State, accounting for from 31 per cent to 40 per cent of the total each year for the period 1927 to 1932. A plan for securing additional information about this important problem was outlined.

For the year 1933 there have been filed with the Bureau of Vital Statistics 505 certificates giving as the cause of death some condition related to pregnancy. To the physician sign-

ing each death certificate an inquiry form was sent, with the request that additional information be supplied and returned. When the death certificate was not signed by a doctor, the form was sent to the midwife whose name appeared on the birth certificate. Of the 505 maternal deaths queried, 334 forms were returned with sufficient supplemental information to be of value. In this second report only a few of the outstanding facts contained in these records are discussed.

Color: The 334 reports returned were distributed as to color as follows:

White	209	62.6 %
Colored	125	37.4 %

A larger per cent of replies were returned from the white deaths queried than from the Negro deaths. Fifty-eight and four-tenths per cent of the total maternal deaths in the State are white and 41.2 per cent colored.

The returns from the queries were compiled on tally sheets. The summary for the white and colored is given in Tables No. 1 and No. 2. No attempt is made to give a detailed cross tabulation of all the information contained on the questionnaires. It is felt that such minute analysis would not be worth while until a larger group of replies have been accumulated.

TABLE No. 1
Three Hundred and Thirty-Four Maternal Deaths

TOTAL WHITE		TOTAL	TROUBLE PREVIOUS PREGNANCY	PREVIOUS ABORTION	ILL WHEN FIRST SEEN
	WHEN FIRST SEEN				
Delivered by Physician	Referred by Physician or Own Patient				
	Fourth month or before	44	12	9	26
	Fifth month before eighth.....	31	9	5	22
	Eighth month before labor.....	21	9	3	15
	In labor	60	14	7	48
	After delivery	25	4	4	19
	Sub-total.....	181	48	28	130
	Referred by midwife.....	6	2	1	4
Delivered by Midwife	Physician after delivery..	18	2	2	18
	No physician.....	4	---	---	---
	Sub-total.....	22	2	2	18
Total.....		209	52	31	152

TOTAL COLORED		TOTAL	TROUBLE PREVIOUS PREGNANCY	PREVIOUS ABORTION	ILL WHEN FIRST SEEN
	WHEN FIRST SEEN				
Delivered by Physician	Referred by Physician or Own Patient				
	Fourth month or before	9	3	2	7
	Fifth month before eighth.....	11	4	1	7
	Eighth month before labor.....	11	1	---	10
	In labor	20	2	4	20
	After delivery	14	1	3	12
	Sub-total.....	65	11	10	56
	Referred by midwife.....	25	4	1	21
Delivered by Midwife	Physician after delivery..	27	3	2	21
	No physician.....	8	1	1	1
	Sub-total.....	35	4	3	22
Total.....		125	19	14	99

TABLE No. 2

Certain Physical Signs, Symptoms,
and Treatment of Maternal Cases

Total maternal deaths, 334	
Blood pressure of 140 or over....	146
Syphilis	8
Albumin	163
Placenta prævia	12
Premature separation of placenta	15
Hemorrhage	100
In labor	42
After labor	58
Retained placenta	30
Forceps delivery	44
Other operation	79
Vaginal examination	191
Duration of labor 12 hours and over	70
Temperature over 100° F.....	168
In labor	62
After labor	106
Perineal repair	23
Acute symptoms before labor.....	119
Delivery before death.....	263
Married	281

Of the 209 white maternal deaths, 187 or 89.5 per cent were delivered by physicians; of the 105 colored, 90 or 72 per cent were delivered by physicians. The per cent of total births delivered by physicians ordinarily runs around 85 per cent of the white and 26 per cent of the colored.

It is significant that of the 187 white women who were delivered by physicians, 50 had experienced trouble with previous pregnancies, 28 had

had previous abortions, and 130 were ill when first seen by the doctor who delivered them. Even of those who consulted their doctor before the end of the fourth month, 26 of the 44 apparently sought aid primarily because of alarming symptoms. In other words, **only 18 of the 209 white women whose maternal experience ended disastrously gave their doctor a fair chance to save them.** With the Negro women the facts are much more gloomy. Of the 125 dying, only nine sought a doctor by the fourth month, and seven of these nine were sick when first reporting to their physician. Our study as yet has no data with which to evaluate prenatal care statistically. Even without a control of this sort it would seem possible to draw up a serious indictment against lack of care. In this group of 334 unfortunate women, only 20 actually sought medical guidance early in their pregnancy and while still apparently in good health.

Puerperal Albuminuria and
Eclampsia

Puerperal albuminuria and eclampsia causes the largest number of deaths from maternal causes in North Carolina. This was also true for the group queried and for which replies were received. The maternal deaths by causes are given in Tables No. 3 and No. 4.

TABLE No. 3
Maternal Deaths by Race and Cause

CAUSE OF DEATH	TOTAL	PER CENT OF TOTAL	RACE	
			White	Col.
Abortion with septic conditions.....	24	7.2	17	7
Abortion without mention of septic conditions.....	14	4.2	9	5
Ectopic gestation.....	5	1.5	2	3
Other accidents of pregnancy.....	10	3.0	8	2
Puerperal hemorrhage	33	9.9	21	12
Puerperal septicemia.....	51	15.3	28	23
Puerperal albuminuria and eclampsia.....	114	34.1	70	44
Other toxemias of pregnancy.....	24	7.2	15	9
Puerperal phlegmasia alba dolens, embolus, sudden death	13	3.9	9	4
Other accidents of childbirth.....	42	12.6	26	16
Other and unspecified conditions of the puerperal state	4	1.2	4	0
All causes	334	100.0	209	125

TABLE No. 4
Maternal Deaths by Cause and Certain Physical Signs, Symptoms, and Treatment

CAUSE OF DEATH	Total	Ill When First Seen	Blood Pressure 140 and Over	Albumin in Urine	Hemorrhage in Labor	Hemorrhage After Labor	Forceps Delivery	Other Operation	Vaginal Examination	Temp. 100 and Over		Acute Symptoms Before Labor	Retained Placenta
										In Lab.	Aft. Del.		
Abortion with septic conditions.....	24	21	2	6	7	8	6	7	13	7	13	4	8
Abortion without mention of septic conditions.....	14	10	3	7	3	4		5	6	6	1	11	3
Ectopic gestation.....	5	5	1	2	1	1		1	2			2	
Other accidents of pregnancy.....	10	6	3	5	1	1		2	7	1	3	4	
Puerperal hemorrhage.....	33	21	7	7	18	20	2	9	20	3	4	10	5
Puerperal septicemia.....	51	38	13	19	5	10	4	13	29	11	38	15	9
Puerperal albuminuria and eclampsia.....	114	90	80	83	3	6	19	28	69	18	26	48	
Other toxemias of pregnancy.....	24	23	16	20		3	3	4	12	6	8	12	
Puerperal phlegmasia alba dolens, embolus, sudden death.....	13	9	4	2	2	1	3	3	8			4	1
Other accidents of childbirth.....	42	27	18	13	3	6	6	7	24	9	12	10	4
Other and unspecified conditions of the puerperal state.....	4	2		1				1	1		1	1	
All causes.....	334	252	147	165	43	60	43	80	191	61	106	123	30

Puerperal albuminuria and eclampsia accounted for 114 of the 334 maternal deaths. Puerperal septicemia was in second place with 51, less than half the number due to puerperal albuminuria and eclampsia. If to the 114 deaths due to puerperal albuminuria and eclampsia are added the 24 caused by other toxemias of pregnancy, the total is raised to 138, or 41.3 per cent of the total deaths. Ninety of the 114 were ill when first seen, and 83 of the 114 showed albumin in the urine and 80 had a blood pressure of 140 or over. In this group there were 19 forceps deliveries.

Both races were affected to about the same proportion with this condition. Of the 209 white maternal deaths, 70 of them, or 33.5 per cent, were due to puerperal albuminuria and eclampsia, and of the 125 Negro maternal deaths, 44 of this number, or 35.2 per cent, were chargeable to this condition. In this group 48 showed acute symptoms before labor.

There were 40 of the 70 white patients and 19 of the 25 colored, making a total of 59, that received hospital care and 55 that were attended at home. Of the 59 receiving hospital care, 50 were ill before being seen by any physician; and of the hospital cases, 31 had acute symptoms before labor, indicating the lateness with which treatment was instituted. The best medical attention in hospitals cannot save the lives of these mothers when they do not come under this treatment until they are already dangerously ill.

Under the cause of death designated as "Other Toxemias of Pregnancy" there were 24 deaths. Under this cause is classified such conditions as auto-intoxication of pregnancy, pernicious vomiting, puerperal coma, toxemia of pregnancy, and like terms. Twenty-three of the 24 in this group were ill when first seen. Sixteen received hospital treatment.

Puerperal Septicemia

In many states, particularly in the North, puerperal septicemia causes the largest number of maternal

deaths, while in North Carolina it holds second place, usually accounting for approximately half the number of deaths caused by puerperal albuminuria and eclampsia. Although puerperal septicemia ranks in second place in North Carolina and first in Northern states, our rate exceeds theirs. For sake of comparison, the rates for three Southern and for three Northern states are tabulated below.

Death Rates From Puerperal Septicemia 1931

STATE	Rate per 1000 live births
New York	1.2
Michigan	1.3
Massachusetts	1.4
North Carolina	1.6
Alabama	1.8
South Carolina	2.1

However, our large Negro population is a factor in the high mortality from this condition. Among the total Negro maternal deaths the rate from puerperal septicemia is over two and one-half times what it is for the white race. Although this proportion did not hold in the group of cases under study, the per cent of the total Negro maternal deaths caused by puerperal septicemia was greater than the per cent among the whites. There were 51 deaths from puerperal septicemia in the total 334 maternal deaths. Twenty-eight of these were white and 23 Negro. If the proportion among the white and colored had been the same there would have been 32 white and 19 colored.

As would be expected, midwives attended a much greater percentage of the Negro deliveries than of the white deliveries in North Carolina. In 1932, the most recent year for which final figures are available, midwives attended 15.1 per cent of the live white births and 74.2 per cent of the live colored births. Of the 209 white and 125 Negro cases studied in this present report, only 10.5 per cent of the whites and 28 per cent of the Negroes were delivered by midwives, or of the total 17 per cent. Midwives delivered 25.5 per cent of the cases dying from puerperal septicemia, and

an additional five cases were referred to physicians by midwives previous to actual delivery, bringing the total to 35.3 per cent in which midwives were in attendance. Thirty-eight of the 51 cases of puerperal septicemia were ill when first seen by the physician whose name appeared on the death certificate. However, a number of these were cases referred to him by another physician; especially is this true in cases receiving hospital care. There were 22 cases receiving hospital care and 29 cared for at home. Nineteen of the 21 receiving home treatment were ill when first seen by a physician and 19 of the 22 hospital cases.

Prenatal Care

The evidence seems to indicate very definitely that for the reduction of maternal deaths in North Carolina we need reasonably adequate prenatal care for our expectant mothers. At the request of Dr. James M. Parrott, conferences with doctors and with Dr. G. M. Cooper, director, or representatives of the Division of Maternity and Infancy, were held in each section of the State and culminated in a meeting of seventeen practicing physicians in Raleigh, March 26, 1934. This group, after a com-

prehensive discussion of the problem, adopted a report defining the general principles of prenatal care as presented by their committee. This statement of principles gives every health worker a definite and concrete program for which to work. It is a challenge to every person interested in public health. Who can disagree with these principles?

[The committee report mentioned here was published in full in the May issue of THE HEALTH BULLETIN.]

To the vast majority of the maternal disasters which occur in North Carolina, the medical profession has not had an opportunity to give reasonably adequate protection.

The marked prevalence of toxemias of pregnancy in this State demands a comprehensive investigation of the cause as well as the prevention and treatment of this condition.

Since our outstanding cause of maternal deaths is the toxemias of pregnancy, it is urgent that the women of the State receive adequate prenatal care.

If every prospective mother understood the protection which she needs during this most important period of her life, she would find some way to procure that service.

OKRA FOR GASTRIC ULCER

A few years ago the writer received from a former patient who for years suffered from a recurrent gastric ulcer, in spite of repeated operations, a letter brimful of enthusiasm over the discovery that okra was a sovereign remedy for her disease. Recently J. Meyer, M.D., and his associates have announced the discovery that powdered okra is an efficient means of speedily relieving the pain of peptic ulcer. An interesting fact revealed by a careful study of the reaction of the stomach to this bland

food is that under the use of okra, notwithstanding the relief of pain, the gastric acidity increases 50 to 72 per cent.

Modern investigations show very definitely that the pain of peptic ulcer is not directly due to the chemical effects of an overabundant gastric juice, but to spasm or cramp of the pylorus, due to irritation of the sensitive duodenum by the acid gastric contents. The emollient okra protects the sensitive duodenal surfaces and so stops the cramps.—Dr. J. H. Kellogg in *Good Health*.

The Invalid In the Home

By MARY CHEATHAM

HOME care of the sick serves three main objectives: the welfare of the patient, both physical and mental; the welfare of others with whom the patient may come in contact, and the comfort of the patient.

Steps necessary for the physical welfare of the patient vary with the illness and will usually be prescribed by the doctor. The most important rule in all cases is to follow exactly and completely the doctor's instructions. The seemingly insignificant detail which you disregard may be the most important. It is reasonable to suppose that years of study in a particular field enables the doctor to know better what to do than the neighbor who gives unsought advice.

While avoiding the "advice" of overly officious neighbors, it is also well to avoid patent medicines except on recommendation of your doctor. Any patent medicines which have real value are already being prescribed by the medical profession. Others, especially those of the "secret formula" type and those supposedly endorsed by a supposed doctor in Kalamazoo or Kamchatka, are usually just so much bait to catch the suckers. Most of them have little or no real value; many of them are actually harmful; and all of them sell for far more than they are worth.

One of the things on which the welfare of the patient may depend is the observation of danger signals: high fever, pain, unconsciousness, undue fatigue, and abnormal pulse rate or breathing. Such symptoms should be reported to the doctor.

The mental attitude of the patient has much to do with his physical welfare. The will to live is often more powerful than drugs, and a happy, cheerful disposition will help any patient. A sunny, well-ventilated room, flowers, and carefully chosen books and games usually help to

take the patient's mind off his illness and keep him cheerful. Attendants and visitors should avoid telling the patient distressing news or discussing depressing subjects, such as deaths, accidents, operations, illnesses, or family troubles.

The welfare of others is of particular importance in the case of contagious diseases. Here again the doctor will give specific instructions, but there are certain rules which should be followed in all contagious cases. Cleanliness is of the first importance. Flies should be kept away from the patient, his food, soiled clothes, and especially from his excreta. Discharges of the nose and throat should be received on material which can be put immediately into a closed paper bag and burned. Food left on the patient's tray should never be eaten by anyone else, but should be burned. In some cases it is necessary to disinfect discharges of the bowels or bladder to prevent the spread of the disease germs. If no other disinfectant is available, the U. S. Public Health Service* says "a bucket of boiling water (about one gallon) added to a stool, which is then covered and allowed to stand until cool, will destroy practically all bacteria." The attendant should always scrub her hands thoroughly with soap and water and a nail brush after handling the patient and things touched by him, and before leaving the room. The attendant on a person with a contagious disease should never, if possible, care for other members of the family or handle in any way the food of the rest of the family. People other than the attendant should not be allowed in the room of the person with a contagious disease. Dishes and utensils used by the patient should be boiled after each using. Bed linen and clothing of the patient should be boiled for twenty

* U. S. P. H. S. Reprint 287, "The Practical Use of Disinfectants."

minutes before they are allowed to go in the regular laundry. After the patient recovers, the room, furniture, and bedding should be thoroughly cleaned, sunned, and aired according to the doctor's instructions.

In the average home illness, if there is no danger of contagion, the chief consideration is for the comfort of the patient. One should remember that a sick person is likely to be weak and nervous and to tire easily. Little things assume big proportions, and things which a well person would consider trivial may be quite annoying to the invalid. A few such things are glaring lights, squeaking doors or chairs, and flapping window shades. The patient's chief business is to conserve what strength he has and to gain more. Anything, no matter how small, which eases his mind or makes him more comfortable or makes him tire less easily serves a useful purpose.

The patient's room plays an important part in his comfort. He should have a room to himself, which should be sunny and well ventilated. Several times a day the room should be flushed with fresh air by opening all the windows for a few minutes while the patient is warmly covered. Avoid overheating the room. The best temperature for the room is from 65° to 68°; if necessary, the patient can have extra cover or a hot-water bottle. Of course the sick room should always be kept clean and neat, but care must be taken not to raise dust. Oil mops or damp cloths on brooms will prevent this.

Quiet and freedom from disturbance are desirable. For this reason it is advisable for other members of the family to remove their possessions from the sick room so that they will not be creeping in at all hours of the day and night to find a collar button or a spool of thread.

Feeding the invalid is always one of the problems of home care of the sick. Food should be nourishing and easily digested and calculated to build up the patient's strength. The doctor will advise whether the pa-

tient needs liquid, soft, light, or full diet. Attractive serving of meals is important. Fresh napkins, neatly arranged dishes with nothing spilled over the edges, the patient's favorite dishes, attractive garnishes, or a fresh flower or small surprise on the tray help stimulate a weak appetite. For a patient on a long illness, meals may be the chief recreation.

All sorts of things help to increase the comfort of the patient: adjustable reading lamps, bedside tables, always with cool drinking water in a covered container within reach, and all sorts of little devices and gadgets suggested by the ingenuity of the patient or his friends for his particular case.

The patient, unless very sick, should be given a daily bath (given in bed if necessary), and should have teeth brushed and hair combed at least once a day. Other ministrations are soothing. Frequent changing or shaking the pillows, straightening the covers, and drawing wrinkles out of the sheets are helpful. If the patient is unable to move himself, the attendant should frequently turn him from side to side or otherwise change his position to prevent his tiring and to relieve pressure on any one spot. Alcohol rubs and massages of the back and head are refreshing and soothing. Particular care must be taken of the skin to prevent bed sores, which are most likely to occur at points of pressure. These can be prevented by keeping the patient clean and dry, and by keeping the bed free from lumps, wrinkles, and crumbs, by changing the patient's position often, and by using special pads or small pillows to raise parts most subject to pressure.

To give the patient a bed bath, first have the room warm and all doors and windows closed to prevent chilling. Assemble all necessary material conveniently at hand before starting the bath. Remove all cover except a special bath blanket which serves as covering during the bath. Slide another bath blanket under the patient to protect the bed and tuck it

under the mattress at the side. Have patient on the edge of the bed and remove night clothes. Have water comfortably warm and replenish with hot water if necessary. Squeezing wash cloth until there is no dripping, wash and dry one part of the body at a time, keeping the rest of the patient covered with the blanket or large towel and exposing him as little as possible. Wash the face first, then neck and ears, drying each as soon as finished. Wash arms, hands, chest, and abdomen, paying particular attention to arm-pits and the navel. Turn patient on side and back as necessary to reach back and thighs. Wash feet in the basin, protecting the bed with oilcloth or newspapers or towels. Wash particularly between the toes, dry thoroughly,

and rub briskly. Change the water and wash the genitals last. After the bath give an alcohol rub to the back and other points of pressure. See that the bed is put back in order and the patient dry and comfortable. If he is chilly, put a hot-water bottle at his feet. Hot-water bottles are more comfortable and less likely to burn if they are wrapped in a small towel.

But perhaps the most important thing in any care of the sick is to keep up the patient's morale. Be cheerful yourself and keep him bright and cheerful, with the desire to get well. Medicines seldom cure one who has no desire to be well.

N.B.—The author wishes to make acknowledgments to the American Red Cross Text Book on "Home Hygiene and Care of the Sick."

PRE-SCHOOL CLINICS DESERVE SUPPORT

(High Point Enterprise)

The annual pre-school clinic season is again at hand. A project with such obvious advantages to the individual as well as to the school as a whole naturally grows in its scope and effectiveness as the realization of its service becomes more apparent each year, and it is to be hoped that parents of children to enter school in the fall will enter wholeheartedly into the purpose of the clinic in the various elementary schools in the next few weeks.

The idea is simply to get every child between five and six years of age examined for the detection of any physical defect which might be present to a sufficient extent to handicap the child in his progress when he begins school. It is necessary for a trained nurse and a practicing physician to carry out the individual examinations. After the child is examined and any handicap noted, the

parent then is urged to take the child to the family doctor or dentist, as the case may be, and have the remediable defects corrected; such items as decayed teeth needing extraction or repair by a dentist; faulty vision in which the child may need glasses; diseased throat in which an operation for removal of adenoids or tonsils may be desirable; undernourishment indicating not only lack of proper food habits, but also in many cases some more remote diseased condition. When such children are examined, properly treated, and the nutritional condition improved, they may be ready to enter school in the autumn with prospects for a successful career enhanced.

In April this year 487 infant deaths under one year of age were reported. In 1933 only 387 such deaths occurred. This should be of more concern to North Carolina people than an Arizona kidnapping.

A Tooth Cannot Repair Itself From An Injury

By WALLACE F. MUSTIAN, D.D.S., M.S.D., Warrenton, N. C.

A TOOTH is the only part of the human body that does not possess the ability to repair itself from an injury. Once a tooth is injured from an accident or as the result of dental decay, it does not heal or get well as we speak of an injury or disease occurring in other parts of the body. The dentist can, however, remove the diseased part and repair most injuries to the teeth by artificial means and thus save the tooth for years of service.

Unlike other human tissue, a tooth once formed is hard and flint-like and unyielding to reparative processes. Other body tissues repair themselves when injured because they have a direct blood and lymph supply through their substance to carry away waste products and bring building or nutritive materials. This is absent in the enamel and dentine of the tooth.

The enamel or outer covering of a tooth is chiefly composed of lime. It is the hardest structure in the body and is made of a mass of rods cemented together by a thin network of organic substance. Just beneath the enamel covering is a softer material which makes up the body of the tooth. We call this dentine. It is less dense than the enamel covering and much softer in its texture. This explains why a cavity of some-time duration is always larger on the inside than on the surface or point of entry. The dentine being softer, the decaying process travels faster in it than it does in the harder enamel.

The root of the tooth is made up of a substance which dentists call cementum. It is somewhat like dentine, but softer or more like bone.

In the center of the tooth is a tissue which is known to the public as the nerve. In reality it is composed of a nerve, an artery coming in, and a vein going out, as well as

a lymph system. These are bound together by a fibrous connective tissue. Dentists speak of these tissues as the pulp of the tooth.

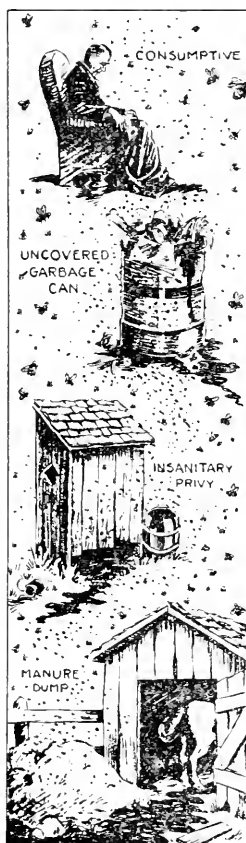
The nerve in the pulp sends out little rootlets or endings into the small spaces in the dentine. This is why a tooth hurts when the dentist works in a cavity, even though the nerve proper is not actually exposed. The nerve endings are disturbed. It also explains why a tooth often aches before the main nerve is reached.

Often a very small cavity can be polished out if it has not actually penetrated the enamel. In this case no filling would be required. If the cavity is not detected early, and the destructive process is allowed to continue, it finally penetrates the enamel, next the dentine, and ultimately the bacteria reaches the blood stream in the center of the tooth. Death of the pulp (nerve tissue) ensues. By this time the infection has reached the end of the tooth, resulting in an abscess.

From this point of infection at the root-end bacteria and their poisons may and often do spread by the blood and lymph stream to remote parts of the body. Infections set up in various parts of the body as a result of being carried from one point and established in another are called secondary infections. This secondary point (foci) of infection may be a greater source of evil than the abscessed tooth, although caused by the tooth. This explains why some patients fail to get relief expected by the extraction of infected teeth. Only a part of the infection may have been removed. The secondary source has been entirely overlooked. Tooth infections are often far-reaching in their effect.

There were seven more maternal deaths in April this year than the same month last year.

From **FLIES** and **FILTH** to **FOOD** and **FEVER**.



WHERE THEY COME FROM

FLIES ARE DISEASE CARRIERS

They breed in manure and feed on filth. They carry filth on their feet and legs, and wipe it off on exposed food.

What To Do About It SCREEN—CLEAN UP

Screen every door and window upstairs and downstairs.

Don't use extension screens. Use good made-to-fit screens or tack mosquito netting over the windows.

Swat the few stray flies that dodge in at the open door.

Don't tolerate open-back privies. When sewerage is not available, use an approved type of sanitary toilet.



WHERE THEY GO

HOW TO PREVENT FLIES—



DESTROY BREEDING PLACES



SCREEN DOORS AND WINDOWS



SWAT STRAY FLIES

MR. JNO. G. BEARD,
CHAPEL HILL, N. C.



The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD OF HEALTH

This Bulletin will be sent free to any citizen of the State upon request.

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NO MONOPOLY IN THIS SPORT



No sports are more healthful than swimming and rowing. They are available to any person who is physically able to reach one of the numerous pools, ponds, lakes, rivers, sounds, and beaches within the borders of North Carolina. The scene shown in the picture above is a daily occurrence in one of the many popular summer camps open at this season throughout the State.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Scarlet Fever
Cancer	Health Education	Smallpox
Constipation	Hookworm Disease	Teeth
Chickenpox	Infantile Paralysis	Tuberculosis
Diabetes	Influenza	Tuberculosis Placards
Diphtheria	Malaria	Typhoid Fever
Don't Spit Placards	Measles	Typhoid Placards
Eyes	Pellagra	Venereal Diseases
Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough
	Sanitary Privies	

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine	5 to 6 months; 7, 8, and 9 months; 10,
monthly letters)	11, and 12 months; 1 year to 19 months;
Minimum Standards of Prenatal Care	19 months to 2 years.
Breast Feeding	Diet List: 9 to 12 months; 12 to 15
Infant Care. The Prevention of	months; 15 to 24 months; 2 to 3
Infantile Diarrhea.	years; 3 to 6 years.
Table of Heights and Weights	Instructions for North Carolina Midwives.

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Notes and Comment

IN this issue of THE HEALTH BULLETIN we are publishing an excellent article on the subject of rabies by Mr. J. W. Kellogg, who for the past twenty-five years has been one of the competent employes of the North Carolina State Laboratory of Hygiene. Mr. Kellogg's article is packed with information on this terrible disease, about which every intelligent citizen should be informed.

Some people have the idea that when a dog's head is sent to the State Laboratory of Hygiene it is reported positive; that is, of having the disease regardless. Such is not the case. About one-half of the heads examined are reported negative. Great care is exercised by the technicians at the Laboratory in making the examination of every dog's head sent there for that purpose. There is nothing mysterious in the examination. To a trained examiner it is easy enough ordinarily to note the presence or absence of the identifying agents in the tissues, the presence of which invariably indicates rabies.

The officials of the State Board of Health—physicians, health officers, and particularly the officials of the State Laboratory of Hygiene—insistently advise against the habit of killing a dog and cutting his head off to be sent to the Laboratory when rabies is suspected. The only excuse for such procedure is when the dog is at large and cannot be corralled with safety to everybody concerned. In such cases it is often necessary to shoot the dog. When that happens, of course the head of the dog should be packed in ice and sent to the Labora-

tory for confirmation of the suspicion of rabies. Then the bitten person can immediately proceed to take the Pasteur treatment. Any dog which bites a person should be confined for two weeks. A veterinarian should be called on, if available, to observe the dog during the period it is confined if the dog develops any untoward symptoms.

With reference to vagrant or loose dogs, we herewith pass along an extract from an editorial appearing in the *Durham Sun* a few months ago on the question of rabies. The position which the *Durham* paper takes is well for all other towns to consider. Says the *Sun*:

"The matter of vagrant dogs is 'too small a matter to worry about' to too many people.

"It's a matter that should become big enough to anybody after such occurrences as the mangling of a Massachusetts child by two vicious bull terriers, the killing of another child in Kentucky by a pack of roving beasts, and the mad depredations of rabid animals in Wake County during which a score or more were compelled to submit to the Pasteur treatment.

"It certainly looms big enough to any parent grieving over a dead or permanently disfigured child who has been waylaid by roaming dogs on the street or set upon while at play in his own yard.

"Durham, so far as we know, has escaped so grim a tragedy as the dog murder of a four-year-old baby, but the possibilities are here. It will be too late insofar as the victim is concerned to act after such a thing has happened."

DURING the past few months, much to the gratification of the responsible officials of the State Board of Health, there has been more discussion throughout the length and breadth of North Carolina on the subject of maternal and infant deaths than at any other period in the State's history. The Secretary of the State Board of Health and the Director of the Maternal and Infant Hygiene Work of the State Board of Health are particularly appreciative of the unusual amount of editorial space which practically every important newspaper in the State has given to this question during the winter and spring months. Much information on the subject has been disseminated, many plans have been evolved and started on their way to better this condition in a number of localities. The medical profession has been interested and has expressed its concern as never before. Almost every angle of the situation has been explored and commented upon. Many new ideas, which will eventually be helpful, have been submitted. While the situation indicated in reports for the first four months of the year, showing an increase of almost 25 per cent in infant deaths, is most discouraging, it is hoped that this is a case in which "the darkest hour is just before dawn."

Among the large number of suggestions offered as to the cause for the lack of prenatal care, which everyone is agreed is more largely responsible for unnecessary maternal deaths, the *Winston-Salem Journal*, in the closing paragraph of an excellent editorial on the subject sometime ago, suggested that the sense of false modesty may be a cause operating to prevent a rather large number of women, particularly those in their first pregnancies, from seeking competent prenatal medical advice at an early date. The editor of THE HEALTH BULLETIN is inclined to agree with the *Journal* for the reason that a rather large number of women write to the State Board of Health and request

prenatal literature to be sent in plain envelopes. The service of the Maternity and Infancy Department is conducted strictly on a confidential basis, and while this particular request cannot be complied with in the mailing of literature, for obvious reasons, all other aspects of this work are treated in strictest confidence, whether it is so requested or not.

The closing paragraph of the *Journal* editorial is as follows:

"Perhaps that sense of false modesty which too often cloaks vitally important matters in a shroud of diffidence or secrecy is largely the cause of many deaths during maternity, women being too timid or ashamed to discuss with nurses or physicians a subject upon which their very lives were hinged. In other cases plain ignorance of elemental pathological facts may have served as the cause of mortality. Both these factors must be driven into the background if the State is to provide a new deal for the mothers of its future citizens."

* * *

IN a syndicate article sent out a few weeks ago from the Polar Expedition now under command of Rear Admiral Byrd at the South Pole, the writer was impressed, above everything else, with one particular item. The article was a description of the daily routine of the large number of men composing the expedition. Their schedule for eating, sleeping, and daily work was included. The item which particularly impressed the editor was that which set forth the information that after thawing out on rising in the morning, the men sat down to a breakfast consisting, among other things, of their favorite cereals with an abundance of fine, fresh, creamy milk from the blooded cows on board, one of which came from North Carolina.

I hope by this time the reader is able to see the point. For those who have not, it is easy enough to indicate. Here is a group of men, far away from their kind, spending the winter in a land surrounded by ice and snow for hundreds of miles; but

in preparation for their trip, which is a scientific expedition and is being carried through with thoroughness in every detail, one of the first requirements was that the men should be provided with fresh milk daily. And the statement means fresh milk; it does not mean canned milk from anywhere or any kind of canned milk, but fresh milk, daily obtained from living cows on board their ship.

If it is necessary—and informed people everywhere agree that it is—to maintain good, sound health under adverse circumstances, to have available daily fresh, rich milk, obtained under such extraordinary circumstances for adults in such a far-away section of the earth, how much more important it is for the children of North Carolina to have available a daily supply of fresh sweet milk. Every reader of THE HEALTH BULLETIN should ponder this report, and if fresh milk is not available to the children of the family, no reasonable sacrifice is too great to make to procure such a necessity.

* * *

A FEW weeks ago the newspapers carried the story that Henry Ford had purchased from the owners in Pittsburgh a cottage supposed to have been the birthplace of Stephen Collins Foster, the great song writer, born in Pittsburgh 108 years ago this month. It seems from the newspaper reports that some people in Pittsburgh have decided on one location as the spot upon which Foster was born, but Ford and the historians consulted decided on another place, which the former purchased, to be removed to his museum of American Relics in Michigan.

Buried in the newspaper report, one significant paragraph is as follows:

"The Foster birth record, locked in the Trinity Episcopal Church here (Pittsburgh), does not give the address of the birthplace."

This item is, therefore, being written for the benefit of the fourteen

hundred or more vital statistics registrars in North Carolina, and for the benefit of the forty-five hundred midwives, the twenty-five hundred physicians, and the one hundred health officers, each and all of whom have a hand in making vital statistics records. If every one of the foregoing participants in the filling out and filing of a birth certificate could know at the time that any of our babies would at some time in the future become famous—perhaps President of the United States or an internationally known song writer, or scientist—it is hardly necessary to state that more care would be taken in the filling of that particular certificate than is ordinarily done.

It is rather remarkable to know that the city of Pittsburgh required the reporting of vital statistics 108 years ago; but it is not surprising to learn that the doctor who attended the birth of Foster, and the vital statistics registrar who accepted his report, were careless enough to file the birth certificate without writing in the address of the baby's parents, giving rise to the dispute concerning the exact birthplace.

Birth certificates have been devised by statisticians and physicians of international reputation to conform to uniform standards. They have been revised time after time, and every question on a birth certificate is put there because it is important that the question be answered, and every vital statistics registrar should see that a birth certificate is properly filled out in every respect before it is accepted.

In these long hot days the baby's crib should be kept in the coolest spot to be found around the house; and it should be thoroughly screened against flies, mosquitoes, and guats. The baby should be given plenty of cool water, but every drop should be boiled before he's allowed to touch it.

Rabies

By JAMES W. KELLOGG, Assistant Director, State Laboratory of Hygiene

THE subject of this article is chosen not because the disease is one of our greatest problems, nor because there are new facts to present, but because it is the one disease which, at the present time, could be actually exterminated if we would but apply the knowledge we possess. We know something of the nature of the germ which causes it; we know how it is conveyed from one animal to another, or from animal to man; we know the behavior of the germ in the body and the explanation of the peculiar symptoms; we know how to give protection against infection, and above all, we know how it may be eradicated.

Rabies, or hydrophobia, is an acute infectious disease caused by a virus, the nature of which is not certainly known. The virus has an affinity for the central nervous system, and is also present in the saliva of the rabid animal. The disease is usually caused by the implantation of the specific virus by the bite of an animal sick with the disease. All warm-blooded animals are susceptible, but it is a disease, primarily, of the canine race, especially dogs. The animals most susceptible are the dog, wolf, cat, cow, and skunk, or polecat. Man, although more resistant, may contract the disease.

The term "hydrophobia" (Greek), meaning "fear of water," may be applied to the disease in man, but it is not true of the disease in dogs. The term "rabies" (Latin), meaning "to rage," may apply to the disease in any animal, but there are times when it is not descriptive, as in the form known as "dumb rabies."

Rabies has been known since the earliest historical times; in fact, it is one of the oldest known diseases to affect animals. Medical literature on the subject extends well beyond the Christian era, and in general literature there are many references in

ancient writings. Plutarch asserted that it was first observed in mankind in the days of the Æsculapiadæ, the descendants of Æsculapius, the God of Medicine. In the 13th Century B.C., Akteon, son of Aristeus, is reported to have died of the disease. Democritus gave an account of it in the 5th Century B.C. In the 4th Century B.C., Aristotle stated: "Dogs suffer from madness which puts them in a state of fury, and all animals which they bite when in this condition become also attacked with madness." Celsus, in the 1st Century A.D., was the first to give a good description of the infection in man, using the term "hydrophobia." Celus Aurelianus (2d Cent. A.D.) also gave a very accurate account of the disease in man. Other writers of that former period and in the later centuries mentioned rabies. In 1271 A.D. it is related that in Franconia thirty persons perished from bites inflicted by rabid wolves which invaded the town, attacking people, herds, and flocks. Also in Paris in 1604 an epidemic of rabies occurred which assumed considerable proportions. Lord Byron, in one of his early poems titled "The Blues," mentioned the fact which was well known at that time, that the saliva of a rabid dog was infectious. Toward the end of the 18th Century began a period of observation which led up to the work of Pasteur. In 1770 the paralytic form of rabies was recognized in man. In 1804 the infectiousness of the virus in the saliva of a rabid dog was established by rubbing it into wounds of various animals, all of which developed the disease. In 1813 was suggested a method of diagnosis of suspected cases by the inoculation of saliva into test animals. In 1821 the identity of the disease in man and animals was established by infecting a dog with saliva from a human case.

Youatt (1850), a celebrated veterinarian, considered rabies at length in his books, and relied on cauterization with silver nitrate to prevent infection. Yet after having been bit with impunity several times, he is reported to have died with rabies. Finally (1882) Pasteur began to treat the disease with scientific accuracy. Although he never succeeded in finding the infecting agent, he developed an efficient prophylactic which saves a large percentage of exposed persons. During the hundreds of years in which rabies was recognized it was only natural that many false ideas and beliefs should arise to confuse people as to the nature and cause of the disease, and some of these false ideas have persisted almost to the present. Some people still believe that a dog's bite is dangerous only in that season of the year when Sirius, the Dog Star, is in the ascendant. We are still asked as to the virtue of the so-called "mad-stone" in cases where one has been bitten, and must advise that it has no more virtue than a brickbat or any other porous substance.

In some cases those who were suspected of exposure to the disease were killed to prevent the development of the disease. In 1810 a bill to prevent such an occurrence was presented in Germany, but as late as 1819 an unfortunate victim of the disease in France was reported smothered to death between two mattresses. One ancient belief in the therapeutic value of cauterization still stands the test. A red-hot iron was used in olden times, but nitric acid has been substituted, and if done early and properly still has a decided value in some cases.

The geographic distribution of the disease is wide. No part of the world is exempt, unless we except a few countries where proper preventive measures have eliminated the disease.

The dog is the natural reservoir of rabies, from which the disease spreads to other animals. Two forms or varieties of symptoms are mani-

festated by dogs, the furious, which is the more common, and the dumb or paralytic form.

Furious or running rabies is responsible for the spread of most cases of the disease. The first symptoms are usually noticed in a change of disposition of the animal, he being either more affectionate or more vicious than usual. This stage may last for one or two days, after which he develops the tendency to foam. Many miles may be covered in the next two or three days, during which time he will bite anything that happens to come in his way. Rarely will he go out of his way to attack either man or other animals. He will try to eat sticks, stones, or any other indigestible article. Usually he looks like a sick animal, although his appearance may not be abnormal. The foaming at the mouth which often occurs results from an accumulation of saliva, due to difficulty in swallowing, together with the constant champing of the jaws. If the animal lives to return home he seeks a secluded spot, develops paralysis, and soon dies.

In the dumb form the dog may show no signs of irritability, and the first symptoms noticed are those of paralysis. He hides away, develops paralysis of the lower jaw, which drops down, the dog being unable to close its mouth. Being unable to swallow, he is suspected of having a bone stuck in his throat, and attempts to treat the animal may result in an accidental exposure to the disease. Death occurs in from one to three days.

When cats develop furious rabies they are especially dangerous to children, rushing out from a hiding place and scratching and biting savagely. The voice is usually lost, the animal mewing hoarsely. Later they refuse to eat, and die with paralysis within a few days.

Cattle are susceptible, and when affected are capable of doing much damage, due to their size and strength. The furious type is more common in this animal than the

dumb form, although both occur. Here also a change in disposition is usually the first symptom, followed by a loss in appetite, lessened flow of milk in cows, restlessness, increasing fury, pawing the ground, bellowing loudly with a peculiar change of voice, growing more quiet about the fourth day as paralysis develops, and dying a couple days later.

All other warm-blooded animals are liable to contract the disease, but birds, such as fowls and pigeons, are quite resistant, due in all probability to their higher body temperature. Man, too, is more likely to escape infection than the lower animals. Children are more susceptible than adults.

In man, as in the animals, the incubation period is from two weeks in the most severe bites to several months, and cases are on record where the onset of the disease was delayed as much as twelve months. The location and severity of the bite determine the time which elapses before the disease develops. Bites on the face or hands are more dangerous than on other parts of the body. Many persons actually bitten by rabid animals escape infection. The virus may be wiped off from the teeth by the clothing, or there may be an individual immunity among certain persons. Statistics from the Pasteur Institute in Paris show that about 16 per cent of those bitten who failed to take preventive treatment succumbed to the disease.

The relatively long incubation period enables us to protect the patient by preventive inoculation. Briefly, this consists of the injection of a vaccine made from the spinal cords of rabbits which have been infected with a very rapid form of the virus. The cords are attenuated by drying and by passage through many generations of rabbits. The story of the trial of his vaccine by Pasteur forms one of the most dramatic chapters in the history of medicine. His vaccine is still used with slight modifications. The control of the disease in man now rests entirely upon these

preventive measures. After symptoms appear there is no known cure. Either we must continue to attempt control of the disease in man by preventive treatment or eliminate rabies in dogs. This could be accomplished by preventing rabid dogs from biting other dogs and other animals.

The efficacy of the Pasteur treatment is shown by the extremely small number of cases which develop after treatment. The mortality among treated persons averages less than 0.1 per cent. Immunity acquired against rabies, however, is relative and not absolute. The usual cause of death following treatment is delay in starting the series of injections. Other causes may be either a massive dose of the infectious material or an extremely virulent strain of the virus. Possibly, as in other diseases, there may be certain persons who are incapable of acquiring the necessary immunity. The period of immunity gained through a course of treatment varies also. Partial immunity is probable by the time the treatment is completed, and the highest degree of immunity is reached about five weeks after completion of the treatment. From this time on the acquired resistance to the disease is rapidly lowered, and at the end of six or nine months is completely lost.

Unfortunately, there are sometimes serious results or complications to the antirabic treatment, the most common of which is paralysis. For this reason it is unwise to take the treatment unless it is indicated. In a majority of cases the paralysis is temporary, but in some few cases it is fatal. Some have assigned such a result to an abortive case of rabies, modified by the course of treatment. The fact that paralysis occurs in cases where the biting animal was not rabid or where the chance of infection was slight argues against this possibility. It seems more probable that it is due to anaphylaxis, the result of injection of foreign proteins into the body, or to the toxin of rabies.

When one is bitten by a dog, we

recommend the following procedure: If the dog appears normal and there seems to be no reason to believe that he is mad, he should not be killed at once, but confined securely and observed for a period of two weeks, to be certain that he was not in the early stages of rabies at the time the person was bitten. If the services of a veterinarian are available he should observe the dog. If the animal remains well and healthy for two weeks, he may be released and any person bit need have no fear of coming down with the disease because of the bite. This period of observation is advised in all cases as preferable to killing an apparently normal dog and sending the head to the laboratory for examination. The reason for this is that if the dog is killed in the early stage of rabies, the diagnosis may be missed in the microscopic examination, and necessitate an animal inoculation, as a confirmatory test. Weeks or months may pass before the rabbit succumbs to the disease, and during all this time the uncertainty remains regarding the diagnosis. Dogs suffer from other diseases, and such a period of observation will often rule out the possibility of rabies, and save the patient from the necessity of undergoing the antirabic treatment.

If, on the other hand, the dog should manifest symptoms of rabies at any time during the observation period, he should be killed without injury to the brain, the head detached, packed in ice in a double tin container, and expressed or brought to the laboratory for examination. The brain structure is very soft and liable to injury and decay, and when received in this condition a satisfactory examination is impossible. After the results of examination are known, there will still be time to start the preventive treatment, except when the wounds are on the head or face, and in severe bites on the hands or other exposed parts of the body, when treatment should be started without delay and discontinued after the pe-

riod of observation has shown that the animal was not rabid.

The question arises each day as to who should take the Pasteur treatment, and in many cases it is difficult to decide. However, we believe that the only ones who should are: first, one who has been bitten or scratched by an animal known to be rabid; second, one who has fresh open wounds in the skin which have been exposed to the saliva of an animal known to be rabid; third, one who has been bitten by a sick animal that has exhibited symptoms of rabies, although a definite diagnosis has not and cannot be made; and fourth, one who has been bitten by an apparently normal animal that has disappeared, or for any other reason cannot be examined or observed.

It is always wise to call a physician, who will properly cleanse and dress the wound. Before the Pasteur treatment became available, cautery of the wounds was practiced, but now in most cases it is not advisable. The wound should be treated like any other similar wound, and the question of the advisability of taking antirabic treatment decided promptly.

The question as to the possibility of infection through drinking the milk from rabid cows is still in dispute. The milk as well as the saliva contains the virus, but we know that the gastric juices will quickly destroy it, and except in cases where there are abrasions of the skin or mucous membranes there is no danger of infection through drinking infected milk.

When there is doubt as to infection of cows in a herd, the milk should be boiled or pasteurized until after the expiration of the incubation period, the animals being watched carefully in the meantime for symptoms of the disease. Persons with cuts or abrasions on the hands should not milk such cattle during this period. Cattle known to be bit by rabid dogs may be immunized if the treatment is given promptly.

The control of rabies in man by preventive treatment of those bitten

has been considered, but there is a much more efficacious and far-reaching method—that of restraint of the dog and the consequent elimination of rabies among dogs. This method, coupled with the destruction of the stray or ownerless dog, has been tried in several countries with striking results. Rabies has been exterminated from Denmark, Norway, and Sweden for more than thirty years. Before the war it was unknown in Germany except along the borders, and in England there was no rabies for over twenty years until it was reintroduced by returning soldiers who brought back infected dogs from France. It has again been eradicated from England. In Australia there has never been a case of rabies, for that continent has always had a quarantine law for dogs. The enforcement of similar measures would entirely do away with rabies in the United States.

Recently preventive vaccination of dogs against rabies with one subcutaneous injection has become quite popular, and coupled with the proper restraint of the dog should prove of value in the elimination of the disease. For the protection of the children in the home, the annual vaccination of the pet should be practiced in all cases. However, no such measures can ever be expected to give absolute protection.

In 1927 Dr. C. A. Shore, then Director of the State Laboratory of Hygiene and a recognized authority on Rabies, attended an International Rabies Conference in Paris, which was called by the Health Section of the League of Nations. Representatives from twenty-four countries were present, and six full days were given to discussion of the subject. The main conclusions of the conference are as follows:

1. It has been admitted for a long time that the presence of Negri bodies in the nerve cells of the brain is diagnostic of rabies, but the real nature of these bodies is still undetermined, and the question is left for

further study and complete confirmation.

2. The conference was unanimous regarding the efficacy of the original dried-cord method of preparation of the vaccine, and also of the method of glycerinization of this preparation. It also declared that the vaccine may safely be treated with carbolic acid or ether, with satisfactory results, and that such vaccine is preferable in tropical countries.

3. The most interesting of the discussions was perhaps that concerning the etiology of the paralytic symptoms which occur in rare cases during treatment, but it was found that the ultimate cause of these symptoms was still unknown. It is found that they occur less frequently when the glycerinated or carbolized vaccines are used. (In North Carolina the glycerinated vaccine is used.)

4. The conference recommended that the study of preventive vaccination of animals, especially dogs, be continued, but did not think that changes in legislation, based on general vaccination of dogs, should be encouraged at present. The conference specifically stated that "Dogs bitten by animals known to be rabid shall be destroyed, even if previously vaccinated." It is interesting that this statement is in exact accord with the law which has long been in force in this State, but which, unfortunately, is not always observed. The conference finally concluded that "The only measures that will completely eradicate rabies are the restriction of the liberty of the dog, unless muzzled, to the premises of the owner, and the destruction of the ownerless dog, and recommends that these measures be embodied in the legislation of the various countries." These conclusions still represent the best thought on the subject.

For the benefit of those interested we quote the present law in this State on the subject:

"Failing to kill mad dog. If the owner of any dog shall know, or have good reason to believe, that his dog,

or any dog belonging to any person under his control, has been bitten by a mad dog, and shall neglect or refuse immediately to kill the same, he shall forfeit and pay the sum of fifty dollars to him who will sue therefor; and the offender shall be liable

to pay all damages which may be sustained by anyone, in his property or person, by the bite of any such dog, and shall be guilty of a misdemeanor, and fined not more than fifty dollars or imprisoned not more than thirty days."

Life Begins At Forty

(Mocksville Enterprise)

FRANK SMETHURST in his *News and Observer* column believes that "A lot of sluggish hopes, quickened to the lilt of Dr. Walter Pitkin's optimistic philosophy that life begins at forty, will slow up the latest medical pronouncement that it virtually ends at twenty-six."

Mr. Smethurst quotes Nathan S. Davis, internationally known heart specialist, as having said that Dr. Pitkin had cruelly tricked those forty and past by the philosophy carried in his book entitled, "Life Begins at Forty." And he quotes Mr. Davis as having said that we are not living after twenty-six, but that we are slowly dying, and we ought to bring to the process more of the decorum of the graveside than the sprightliness of youth.

We have just finished reading Dr. Pitkin's book, and while we believe that it presents life after forty in a somewhat radiant manner, yet we do think that the statement that life ends at twenty-six is utter piffle. As a matter of fact, those keyed up for a long and vigorous life are barely developed at twenty-six. And, after all, it depends on the person. Some people are young at forty and really just get started to living, while others may be getting old at forty. So Dr. Pitkin nor Mr. Davis can neither one successfully comment upon this question by the discussion of humanity as a whole. The average person is what he inherits physically—no more and no less. If your four grandparents were old at twenty-six, then you will be old at twenty-six. On the other hand, if your four grandparents were young at eighty, then you will be young at eighty.

This is the theory of Dr. Albert Wigam, who is possibly the best authority on heredity in the country. Not only do we take his statement for this, but observation will satisfy anyone of the approximate truth of this theory. Of course, we would not say for a minute that it is not possible for one to add to his years by proper living, but we do sometimes doubt the ability of any one generation to materially raise or lower its standard of vitality. But however physically weak any family might be, we still balk at the suggestion that anyone starts getting old at twenty-six. There may be sick folks at twenty-six, and disabled folks at twenty-six, but their feebleness is in no instance due to advanced age.

SLEEP IS STILL A MYSTERY

Although almost a third of life is spent in sleep, the problem of how sleep comes about is still a puzzle to the scientists who have given most thought to its solution, Dr. S. W. Ranson, professor of neurology and director of the Institute of Neurology, Northwestern University, reported recently. "Many theories have been advanced, but they are all unsatisfactory," he said. "It has been supposed that during activity fatigue substances are produced and accumulate in the blood, and that these have a narcotic action on the brain. The accumulation of these substances would thus periodically induce sleep, during which they would be excreted from the body, thus allowing for the return of the waking state. But against this theory are

the facts that sleep, as in an afternoon nap, may come when there is little fatigue, that extreme nervous fatigue often leads to insomnia, and that normal sleep, unlike ether narcosis, is easily interrupted by noise or other disturbances.

"Another theory, which at one time received considerable attention, is that during sleep the conduction

pathways in the nervous system are broken by the retraction of small contact points between the neurones. If this occurred, it would stop nervous activity just as effectively as pulling all the plugs from a switchboard would stop all communication over that telephone system. But there is no evidence that such retraction occurs."—*The Diplomat*.

NORTH CAROLINA BUREAU OF VITAL STATISTICS

REPORT FOR MARCH, 1934

	March 1934	March 1933
Total number deaths.....	3,498	2,780
Death rate.....	12.8	10.2
Total number births.....	6,178	6,322
Birth rate.....	22.7	23.2
Infant deaths (under one year).....	610	465
Infant mortality rate (per 1,000 live births).....	98.7	73.4
Maternal deaths.....	51	57
Maternal mortality rate (per 1,000 live births).....	8.3	9.1
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Typhoid and paratyphoid fever.....	2	2
Endemic typhus fever.....	0	0
Undulant fever.....	0	0
Smallpox.....	0	0
Measles.....	77	8
Whooping-cough.....	33	9
Scarlet fever.....	3	3
Diphtheria.....	10	4
Influenza.....	139	128
Acute poliomyelitis and acute polioencephalitis.....	2	1
Epidemic cerebrospinal meningitis.....	0	2
Rabies.....	0	2
Tetanus.....	2	2
Tuberculosis, pulmonary.....	184	179
Tuberculosis, other forms.....	11	22
Syphilis, locomotor ataxia, paresis.....	28	24
Malaria.....	0	0
Cancer (total).....	134	149
Diabetes mellitus.....	38	39
Pellagra.....	29	22
Pneumonia, all forms.....	538	269
Diarrhea and enteritis (under two years of age).....	15	12
Appendicitis.....	23	20
Puerperal septicemia.....	12	10
Puerperal, other forms.....	39	47
Suicide (total).....	17	28
Homicide (total).....	37	30
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Preventable Accidents		
Automobile accidents, primary.....	78	49
Automobile and railroad collisions.....	3	0
Other railroad accidents.....	7	6
Air transportation accidents.....	0	3
Conflagration and accidental burns.....	50	20
Accidental drowning.....	9	4
Accidental traumatism by firearms.....	8	5

Provisional.

Complete except for Wayne County. No report.

CWA Labor Constructs 39,256 Pit Privies In North Carolina

Home Owners Purchase 15 1-2 Million Board Feet of Lumber and 39 Carloads of Cement As a Contribution to the President's Recovery Program

By M. F. TRICE, Assistant Engineer, State Board of Health

DURING the past winter a Civil Works Administration sanitary pit privy construction program was undertaken in ninety-eight of the one hundred counties in North Carolina. This work resulted in the construction of a total of 39,256 pit privies.

When a few of the facts are known relative to the pit privy construction activities of the Civil Works Administration in North Carolina the accomplishments are astounding. Imagine, if you will, the existence of a few hundred men scattered over the length and breadth of the State on December 1 of last year, untrained and unorganized for the task ahead and with no idea at the time of the part they were to take in a State-wide program, and yet at the end of four short months these same men were to have credited to them the construction of 39,256 pit privies located in all sections of the State and every privy conforming to one plan, even in the most minute detail.

The organization and training of the privy construction forces—the conversion of day laborers, farmers, former clerks and office workers, and in most instances anything but carpenters into privy builders—is a tribute to the efficiency and ability of the employes of the State Board of Health. Indeed, had it not been for the alert-

ness of State Health officials, the CWA may have passed into history without having constructed a single privy. As it was, immediately following the announcement of the creation of the Civil Works Administration and the purpose responsible for its organization, there was prepared by the State Board of Health and dispatched to local health officials a privy construction project for each one of the one hundred counties in the State. These one hundred pit privy construction projects were responsible for this important public health work being State-wide in scope.

The public health assets accruing to the benefit of the State as a result of the privy program are manifold. In mere numbers alone, if we assume five persons to a household, almost 200,000 citizens have had improved sanitary facilities provided them by CWA workers. A better appreciation of the value of such work can be obtained by an examination of epidemiological and vital statistics for the past several years. The diseases spread by exposed human excrement are typhoid fever, paratyphoid fever, dysentery, hookworm disease, and diarrhea. The toll in human lives extracted from the State by these maladies during a ten-year period is given in the following table:

DEATHS FROM FILTH-BORNE DISEASES

YEAR	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	Aver.
Typhoid Fever.....	267	270	277	270	226	185	164	152	155	160	213
Paratyphoid Fever.....								2	2	2	2
Dysentery.....	187	175	193	177	136	172	143	138	108	77	151
Hookworm Disease.....	4	4	2	3	1	0	1	3	1	1	2
Diarrhea under 2.....	1,424	1,484	1,463	1,426	1,181	1,318	991	1,102	837	648	1,187
Diarrhea over 2.....	410	351	291	363	296	326	329	324	249	256	320
	2,292	2,284	2,226	2,239	1,840	2,001	1,628	1,721	1,352	1,144	1,875

The death each year in North Carolina of 1,875 people of diseases that could easily be prevented is a terrible license to pay that filth and insanitary conditions may prevail. As awful as is the loss of 1,875 lives each year, largely because human excrement is not properly disposed of, the deaths from filth diseases do not represent the full measure of suffering for which they are responsible. The number of deaths represent only a small fraction of the number of cases of sickness attributable to these diseases. It is generally accepted by public health workers that only approximately 10 per cent of all typhoid fever cases are lost; that only about 5 per cent of all dysentery cases result in death; that diarrhea is fatal to only about 3 per cent over and 10 per cent under two years of age, respectively, of those persons stricken with the disease; and that for hookworm probably less than one-tenth of one per cent of the victims of the disease succumb as a direct result of the malady. Each year, therefore, in North Carolina alone the filth diseases are responsible for between 21,000 and 22,000 cases of sickness, exclusive of the illness caused by hookworm and other intestinal parasites.

In connection with the latter it is pertinent to direct attention to the results of an intestinal parasite survey made this spring by Dr. M. T. Foster, Health Officer of Cumberland County. Stools were examined from 2,711 children (1,378 white and 1,333 colored), and 489, or 18 per cent, of them were found to contain intestinal parasites, of which 85 per cent were hookworm. The stools were collected from specimens taken from all children in small schools and from first graders, underweights, and repeaters in the larger schools. Hookworm infestation equally as prevalent undoubtedly exists among the children in many sections of the State. The results of the Cumberland County survey paint a vivid and pathetic picture of underprivileged childhood. Infestation with intesti-

nal parasites increases the financial burden upon both parents and State, which is reflected in increased doctor bills to be paid by the former and as regards the latter in "repeaters" in school and probably as charity cases eventually.

The transfer of filth diseases from person to person almost always involves the careless disposal of human excrement. Flies, other insects and animals having access to fecal matter carry it from place to place. Flies transfer particles of it to the kitchen and dining-room table; chickens carry it to soil about unclosed springs and to well platforms, where spilt water washes the excreta into the well, or it is carried down into the water on the bottom of the well bucket; storm water sweeps it away to the children's playground, or into the vegetable garden. Soil fouled with the excrement of a hookworm sufferer retains the eggs and larvæ of this parasite long after all trace of the original nuisance has disappeared, and persons treading barefoot over such infected earth expose themselves to this terrible disease. Children, because of the universal practice of "going barefooted" during the warm months of the year, are particularly susceptible. The number of persons stricken with the filth diseases each year is proof of the effectiveness of the agencies responsible for their dissemination.

The construction of 39,256 sanitary pit privies during the past winter will greatly lessen for 200,000 of our people the menace of the filth diseases. Conservative estimate places at 325,000 the number of rural homes that must depend upon sanitary privies or other private systems for safe excreta disposal. **The pit privy program should be continued until every rural home has been provided with a safe method of excreta disposal.**

And how does the privy construction program compare with other CWA projects insofar as carrying out the intent of the President is concerned, viz., the release of local money by the expenditure of Federal

funds for labor? There was certainly no other CWA project executed that released as much local money as the privy work, in that the Government provided the labor and the home-owners the material. The tabulation of the final reports from CWA county sanitation supervisors disclosed that the average labor cost per privy was \$16.29 and the average material cost \$14.59. In other words, as regards contributions to relieve unemployment and promote the recovery of business, the communities of the State, participating in the privy work, practically matched Government money, dollar for dollar.

The pit privy construction program during the four months it was underway in North Carolina consumed 15½ million board feet of lumber and 39 carloads of cement, as well as an appreciable quantity of hardware such as nails, hinges, wire screening, and metal roofing. The stimulus to business provided by such purchases was not confined to a few large urban areas, but was State-wide, being especially noticeable in some of the smaller communities.

It was found a relatively simple matter to "sell" householders on the value of a new privy when the importance of it was based upon the following:

1. Provision of adequate facilities for the safe disposal of human excrement, the construction of which would largely eliminate the possibilities of the spread of filth diseases.

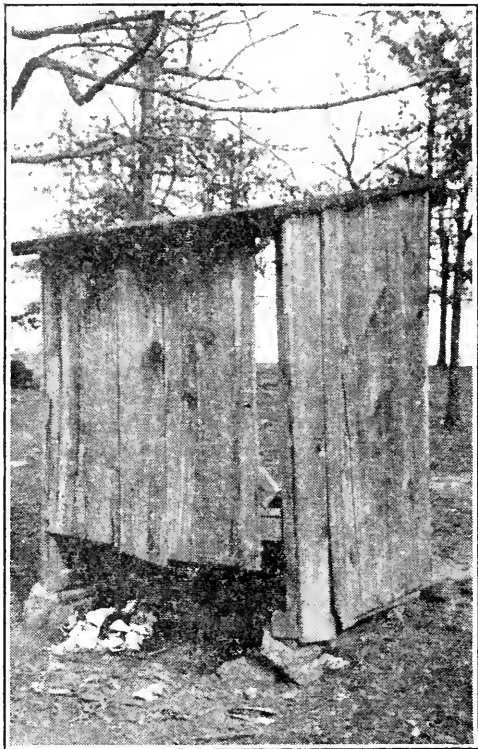
2. Participation in the President's program for the recovery of business.

3. The securing of a modern fly-tight privy for the cost of materials only.

The privy construction program was popular with the relief administrators, as evidenced by the results of a survey made immediately following the close of CWA activities on March 31. Seventy-seven county administrators of relief funds were interviewed by district sanitation officers of the State Board of Health, and only one of them was found not to be in favor of continuing the privy work. The time allotted for the survey, three days, made it impossible to contact all counties. However, the district sanitation officers know the sentiment of relief administrators generally, and it was the consensus of their opinion that fully 95 per cent of all relief officials were in favor of a continuation of the privy work under the FERA.

The officials of the State Board of Health are elated that so much of permanent public health value was accomplished by this unemployment relief activity. However, 39,256 pit privies represent only 21 per cent of the 184,000 privies provided by the 98 county CWA pit privy construction projects approved for execution by the State Civil Works Administrator. Much remains to be done in order that this program may be completed. Even if the CWA privy program is completed by the FERA, only a little more than 50 per cent of the privies needed to sanitize homes without such facilities at present will have been constructed.

Relief labor should continue to be employed for privy construction, since the results of their labor rebound not only to the benefit of the individual householders that are served, but to the improved health and happiness of all our people.



Many of these disgusting, insanitary structures were eliminated by the CWA privy construction workers, or improved excreta disposal facilities provided where none existed before.

One of the 39,256 new privies built by CWA workers. Modern fly-tight buildings such as this replaced many insanitary, disease-spreading backhouses such as is pictured above.





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A WINSTON-SALEM EXHIBIT



Three-year-old twins of Mr. and Mrs. James Dehart of Winston-Salem. Their grandmother, Mrs. H. P. Guffy, has been for many years one of the staff nurses of the State Board of Health. Mrs. Guffy says that "they have had it all"—meaning immunization against diphtheria, smallpox, and typhoid fever.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Scarlet Fever
Cancer	Health Education	Smallpox
Constipation	Hookworm Disease	Teeth
Chickenpox	Infantile Paralysis	Tuberculosis
Diabetes	Influenza	Tuberculosis Placards
Diphtheria	Malaria	Typhoid Fever
Don't Spit Placards	Measles	Typhoid Placards
Eyes	Pellagra	Venereal Diseases
Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough
	Sanitary Privies	

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine	5 to 6 months; 7, 8, and 9 months; 10,
monthly letters)	11, and 12 months; 1 year to 19 months;
Minimum Standards of Prenatal Care	19 months to 2 years.
Breast Feeding	Diet List: 9 to 12 months; 12 to 15
Infant Care. The Prevention of	months; 15 to 24 months; 2 to 3
Infantile Diarrhea.	years; 3 to 6 years.
Table of Heights and Weights	Instructions for North Carolina Midwives.

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Notes and Comment

SINCE the last number of THE HEALTH BULLETIN was issued the State Board of Health has lost the services of two excellent consultants. Dr. D. F. Milam, who was assigned to the Board of Health two years ago as a consultant epidemiologist, was recently transferred by the International Health Board to his new field of work in Panama. Doctor Milam immediately left with his family for a stay in New York, preparatory to his departure for work in Panama. Doctor Milam has rendered valuable service to the State Board of Health. He is exceedingly well informed in all public health matters and is a student of marked ability. He has aided materially in the educational work of the Board during his stay at Raleigh and has contributed in many ways to the success of the State health work. All of his coworkers in the Raleigh office and throughout the State will wish him every success in his new field.

Mr. W. D. Riley, who has also been with the State Board of Health about two years as a consultant in venereal disease work and assigned to the State Board of Health staff by the United States Public Health Service, has severed his connection with health work and has accepted an important appointment with one of the great biological firms of the country. His headquarters will be in New Orleans, to which place he and his family have moved. Mr. Riley has been an enthusiastic and conscientious worker. He has done some most effective work in a number of sections in this State looking toward the con-

trol of venereal diseases. Mr. Riley has proved himself to be a conscientious worker, and it is hoped that the work he has so well started will be continued. His associates also wish him every success in his new field.

Dr. J. C. Knox, who has been with the Board of Health for nearly three years with the exception of a leave of absence to take a course at the Harvard School of Public Health, is now State Epidemiologist. He will also direct the work of venereal disease control handled by Mr. Riley. Doctor Knox has been an assistant to Doctor Milam and has worked in both departments. It is predicted that Doctor Knox will make a most useful and successful staff officer of the North Carolina State Board of Health.

Dr. P. G. Fox, formerly health officer of Buncombe County, on July 1 was made assistant director of County Health Work. For the past year Doctor Fox has been pursuing studies in the Harvard School of Public Health, a scholarship being awarded to Doctor Fox by the International Health Board. In view of Doctor Fox's experience as a county health officer and his thorough preparation for public health work, he is expected to prove himself to be a valuable addition to the State Board of Health personnel.

* * *

AS these notes are being manufactured, the weather man in charge of the Raleigh office is recording the fact that the all-time heat record for late June is being broken—at least

for Raleigh. It is said to be one of the half-dozen hottest cities in the United States.

As the writer, however, has no responsibility for arranging the weather, it is one thing he never worries about. The reason the weather is mentioned here is for the purpose of leading up to a discussion of the question of "dog days" and "mad" dogs. A great many people have the idea that dogs only go mad or suffer from attacks of rabies in hot weather or in the spring of the year. Such is not the case, however. In extremely hot weather dogs sometimes have what is called "running fits." They suffer from heat just as acutely as people. On the other hand, a dog may be infected with rabies in any kind of weather, in any season of the year.

For the past three or four months Raleigh and several other towns in the State have been menaced by an unusual prevalence of rabies in dogs. So far as this writer can tell, there has been no reduction in the number of loose dogs running around.

The one practical way to control rabies is to control the dogs. Every dog going at large, anywhere off his master's premises at least, should be muzzled or accompanied by someone who will keep the dog under control. If this practice were scrupulously followed by every citizen on the American continent for a period of one year, rabies would entirely disappear. Any community, however, can protect itself to some extent by rigidly enforcing the laws that are already in existence about the control of loose or stray dogs.

It is an agonizing sight to see a group of fifteen or twenty men and women and children making their way to a physician's office or the health department for twenty-one successive days to take the hypodermic treatment necessary to protect themselves against the development of hydrophobia after being bitten by a rabid dog. Such people are miserable in the extreme, their suffering is intense, the treatment is painful and

not unattended with some risk. On the other hand, there is nothing to be done after a person has been bitten except to take the treatment.

While not all persons bitten by a mad dog develop hydrophobia, there is no way to tell whether a person will develop it or not. As the disease is always fatal and there is no cure known, there is no recourse left but to take the treatment. It all seems foolish and unnecessary when it is realized that with the general control of the dog population, just as the mule and the horse and the cow are controlled, and every other domestic animal except the dog and the cat, the disease could be prevented and eliminated.

* * *

DEATHS from accidental drowning continue happening right along in spite of all the acres of space devoted to warnings and instruction through the newspapers about preventing such untimely deaths. Even in the month of May, before the swimming season hardly opened, ten deaths by accidental drowning were reported to the State Board of Health.

A majority of such deaths are due to unadulterated carelessness. An example of this, coming along early in the summer, was seen in the case of two boys in the vicinity of Charlotte, who went out on a lake twenty feet deep, neither one of them able to swim but little. They were presumably on the lake for the purpose of fishing. The fish failing to bite to their satisfaction, the boys decided to undertake to hook each other. Sitting in opposite ends of the boat, holding their hooks, fishing poles and lines, they began throwing their hooks at each other; in other words, playing with their fishing tackle. As they became excited and the boat began to rock, they failed to hear the warning cry of a friend being shouted at them from the shore. Of course, the boat overturned and sank like a plummet, and both boys went down with it. By the time rescue forces were organized and their bodies dragged out to

the shore, it was too late to effect resuscitation, and therefore two more lives were sacrificed on the altar of the God of Carelessness.

In the news about swimming and rowing, the usual reports come in generally in the case of young men or boys who dive in shallow water and break their necks or backs, death or permanent paralysis being the sequel. All such deaths may be put on a par with the careless drivers of automobiles, and older people generally come to the philosophical conclusion that nothing can be done about any of it so long as the parties most involved seem utterly indifferent to the consequences. Perhaps if agitation is continued long enough and persistently enough, the coming generation at least may do better than the people of the present. The reason for this note is to add a mite to the general discussion in the hope that it may bear fruit sometime.

* * *

THE eight staff nurses connected with the Department of Child Hygiene of the State Board of Health, and at work since the fifteenth of May for the most part in the eastern part of North Carolina, report a more widespread affliction of babies from colitis than at any time within the past several years.

Death reports coming to the State Board of Health for the first five months of the year record an increase in infant deaths under one year of age for every month compared to the preceding year. For every death which occurs, of course, there are several children who have the disease and who recover, but who will suffer the consequence and after effects for many years to come.

Just why there should be an increase this year no one is able to say. It is a discouraging fact, however, that in the face of all the information which has been broadcast throughout the State for several years, in spite of the hard work done by numbers of people throughout the

State, there should be a discouraging increase in the prevalence of this most fatal disease of babies.

Pure water, safe milk, protection from flies and mosquitoes, and intelligent care for twenty-four hours a day is necessary to protect these babies from death. No family is so poor but that it can afford to boil the drinking water for any baby under two years of age, in the summer-time especially, and if milk is to be had at all, it can be safe milk. If a safe product of fresh milk is not available, a reliable brand of evaporated milk can be secured for even less expenditure than the fresh milk, and with intelligent preparation will be safe for the baby.

Some member of the family should be required to care for the baby every hour, day and night, throughout his first two years. North Carolina's infant death rate is a shame and a disgrace to the whole population of the State. That fact has been repeated in these columns so many times that the officials of the State Board of Health are ashamed to say it in print any more, but it is necessary to keep continually agitating this question until something is done about it. It is one of the things in which it is easy enough for something to be done if the people make up their minds that it ought to be done.

WHY WE HAVE PUBLIC HEALTH SERVICE

(25 years ago, *Transylvania Times*)

"An infant born to Mr. and Mrs. —, —, —, born Sunday night, died Tuesday and was buried in the Brevard cemetery Wednesday. This is a sad bereavement, as they have but one living child, while death has claimed five of their offspring during infancy."

We are indebted to Mr. J. E. Dowd of *The Charlotte News* for the clipping. The headline given the item by the *News* was a single sentence sermon.

Special Child Welfare Nurse Project Report

AFTER considerable preliminary correspondence and conferences with other agencies, on February 5 the Department of Child Health Work of the State Board of Health put on a force of nurses made available through the Federal Re-employment Service. This work was made possible through the coöperation of Mrs. Thomas O'Berry, Federal Relief Administrator of North Carolina, who authorized a division of funds to take care of the expenses and who assigned the administration of this work to the director of the Division of Preventive Medicine of the State Board of Health.

The nurses were employed from lists submitted through the office of Mr. Capus M. Waynick, director for North Carolina of the National Re-employment Service. Mr. Waynick made available to us the files of his office containing their applications of all registered nurses for relief work, as well as the certifications of the various county directors of reemployment. Both Mrs. O'Berry and Mr. Waynick awarded every possible courtesy to the Board of Health in carrying out this rather difficult project. The officials of the State Board of Health feel under obligations to both of these officials.

The work was more difficult because of the fact that nurses other than those who were certified as eligible for relief by their county directors of Federal relief could not be employed. For the work proposed it was desirable that experienced nurses be employed as far as possible. The result was a compromise effort. Some of the nurses employed proved to be exceedingly capable. Others, of course, lacking experience, could not accomplish so much as those more experienced.

The Children's Bureau of the United States Department of Labor at Washington was the agent which sponsored this plan, inaugurating it

throughout the country in all the states which agreed to coöperate with them. The United States Public Health Service also became interested in the project. The Children's Bureau sent two of their field representatives to Raleigh to confer with the officials before the work was inaugurated and after it was under way. They furnished considerable literature and offered a good many valuable suggestions as to how the work could be made more effective.

A total, all told, of sixty-five nurses was employed on the project, beginning, as stated above, on Monday, February 5, and ending on Saturday, May 12. The work covered a period of fifteen weeks. Not more than fifty-five of the special nurses were employed at any one time. One of the best of these nurses, Miss Margaret Burden, of Caldwell County, contracted pneumonia and died soon after beginning the work. Another nurse had to discontinue the work on account of serious illness. One quit to get married. One of the Negro nurses secured a minister, but deferred the marriage until after the conclusion of the work. One quit because of difficulty in arranging transportation. Two resigned as a result of securing permanent employment. One was injured in an automobile accident. One was asked to resign because of difficulty in getting along with the local workers associated with her, and one of the best resigned because she became discouraged and dissatisfied with the apparent result she was getting. By the way, the latter nurse really accomplished a great deal and undoubtedly made a lasting impression on her county.

A total of thirty-five of the sixty-five nurses were assigned to work under the direction of the organized whole-time county departments; most of them in counties having full-time health officers, but a few of

them to work in counties in which whole-time nurses were the only whole-time health officials employed. The remaining thirty nurses were more or less under the immediate supervision of the eight staff nurses employed by the Division of Preventive Medicine of the State Board of Health.

The services of these nurses covered activities in fifty-five of the State's one hundred counties.

Detailed Report

Number of schools visited.....	3,086
Number of children examined	115,771
Number of defectives found..	55,801
Number of children malnourished as indicated by:	
10% or more underweight	21,374
Appearance or report of teacher	2,323
Number of home visits for:	
Investigating malnutrition	4,222
Securing corrections	5,175
Educational bedside work..	3,185
Prenatal conferences:	
Individual	2,529
Group	269
Home visits:	
Prenatal	2,776
Postnatal	2,260
Visits to nursery schools.....	781
Treatment secured by:	
Dentists	280
Physicians	1,198
Immunizations secured against:	
Diphtheria	4,251
Smallpox	12,787
Typhoid fever	5,927

The reader may, by perusing the above figures, understand something of the accomplishments achieved by these nurses. The very fact that more than three thousand schools were visited by these nurses, extending over 55 counties, with nearly 116,000 children interviewed, and, most important of all, 17,618 homes were visited for specific and definite purposes, indicates the scope of the undertaking. It will be noted that these nurses found about one out of five of the children to be suffering from malnutrition. This was indicated by the children being 10 per cent or

more underweight, compared to height and family traditions or by the definite report of the teacher and the child's general appearance. One of the most definite and valuable accomplishments of the enterprise was the securing of immunization against diphtheria, smallpox, and typhoid fever of 22,965 children.

In addition to the routine work described in the report above, several of the nurses spent a great deal of time with the emergency nursery schools put on by the Department of Education in several counties. Visits to these schools numbered 781. That feature of the work in itself was probably worth all the enterprise cost. In many cases the nurses assisted in working out the feeding schedules for these young children, and many cases of malnutrition were corrected in the nursery schools.

The nurses found throughout nearly every section of the State that arrangements had been made for special school lunches under the auspices of the parent-teacher associations, the Federal relief agencies, or under other direction in cases where school cafeteria service had not been previously conducted as a routine enterprise. It may be said here that the school lunch in North Carolina is now nearly twenty years old and is widespread throughout the State. In a number of cases private organizations, such as some of the luncheon clubs, aided in making provision for such things as an additional supply of milk for undernourished indigent children and for corrective treatment, particularly in correcting eye defects, as well as other physical conditions needing medical, surgical, or dental treatment.

The nurses reported aiding in the conduct of 376 pre-school clinics. In connection with this pre-school work, and not listed in the routine reports, 3,351 additional home visits were made; and they aided in the examination of 1,637 pre-school children. Also 238 children were immunized against smallpox in the pre-school

clinics in addition to those elsewhere reported.

One of the most important extra activities reported, not included in the above, was 371 home visits to midwives, giving them instruction, inspection of their equipment, and investigating their activities. One hundred and ninety midwife group conferences were held. The nurses assisted in providing equipment, including bags and clean dresses, for 135 midwives.

The nurses assisted in conducting 56 venereal disease clinics. They also helped obtain 448 specimens for Wassermann tests, and assisted in giving 1,144 anti-syphilitic treatments. This was done, of course, in the offices of the whole-time county health officers who were conducting such clinics. One hundred and ninety-six home visits were made to syphilitic patients who had discontinued taking anti-syphilitic treatment.

The nurses assisted in holding 26 tuberculosis clinics, and they made 101 home visits in connection with this work. Some of the nurses assisted the clinicians from the State Sanatorium at work in the counties where they were assigned in making skin tests, X-ray examinations, etc., for nearly 7,000 children.

Seventeen hundred and eighty-two visits were made to homes for the purpose of establishing quarantine. They assisted in 39 dental clinics being held in the counties at the time. Several thousand pieces of literature holding special interest for the persons interviewed at the time were placed in the hands of families visited. One hundred and fifteen talks were made to civic or community clubs in addition to the work of a similar character done in the several thousand schools visited. Various other activities, not necessary to enumerate in detail, included institutional visits, such as jails, county homes, several hundred visits to expectant mothers and to the mothers of young children needing information about care of their babies.

Nearly two thousand visits were made to homes, in addition to those previously enumerated, to aid in combating such things as rickets, pellagra, untreated injuries, orthopedic conditions, and so on. Several hundred visits were made to school children reported absent from school on account of illness. First aid was administered to 130 people, surgical dressings applied to 266 additional, and a number of births which had not been reported were registered properly. They assisted in securing 872 specimens of blood for malaria examination. They assisted in the births of nine babies in indigent families, and a number of prenatal clinics were held. Much clothing was secured for indigent children, and nearly 100 miscellaneous treatments were secured not otherwise reported, such as securing Pasteur and orthopedic treatments and so on. One nurse secured the name and address of the parents of every child born in her county the previous year, and visited every one of them. Another one managed to secure a wheel chair for a helpless crippled child, through the cooperation of a local civic club. Many more pages might be utilized in a description of the individual activities of these nurses, but the foregoing is sufficient.

This article should not be closed without quoting a few of the comments from some of these nurses as they went along or after the conclusion of their work. One nurse, herself the mother of four children, who did especially fine work, has the following statement:

"I have enjoyed every phase of this work and never realized before just what splendid service your Department is rendering to humanity, especially to the child welfare of the State."

Another:

"My work is ending today with much regret. I would like very much to continue in this county, but if it is not possible for me to work in this county, I would be glad if you would place me in some other county. It has

meant a lot to be able to work. I have no income and have to depend entirely on what I earn for a living."

A Negro nurse, who did some most effective work in one of the counties largely populated by Negroes, working under the direction of the local whole-time nurse in that county, has the following interesting comment, made about the middle of her assignment:

"My school work has been going on unhampered. You might have noticed from the report the number of undernourished children and wondered if anything was being done for correction. It was thought more practicable to have hot lunches served to undernourished children at schools than to try individual corrections. At the time I began we had only one lunchroom outside the city limits. Up to this writing we have ten lunchrooms. Cod-liver oil treatment has been employed in some cases. This, of course, has been secured through the Relief Department Medical Service. The maternity work, especially with the midwives, I feel, is improving. I take as much time as I can with them and the mothers in child care and management. I shall be glad when I can report satisfaction in this part of the work, yet I am not impatient, as I know it will take time, effort, and patience to uproot all of the fixed ideas of midwives and untrained mothers."

The following is a comment from the whole-time county nurse in a county having a rather large Negro population and in which much health work was needed. Two nurses, a white and a colored, were assigned to this department. The nurse in charge of the county wrote, after the work had been going on for two months:

"The two nurses are doing fine work, work that was an impossibility for one person to accomplish. I appreciate your efforts in giving them to me, and they are working most favorably, but under adverse circumstances. The teachers have all been excited on account of measles epidemic and have kept us on the run all over the county. I realize, though,

that we could stay in the schools every day and never get through."

A most efficient Negro nurse employed in this project writes at the conclusion of her service as follows:

"I use this means to thank you for giving me work in the Relief Nursing Project. I regard this appointment, which has provided a living for my family and me, a godsend, a blessing that I am sure each of us will remember. Yet the financial side has not been all; the actual knowledge of conditions among my fellow-people that I have derived by coming in direct contact with those who are weak and those who are strong, many of whom were as rich or as poor as I, has helped me as nothing else could. I thank you again for this opportunity. It has certainly given me a different view on life and an inspiration for public health work."

It may be said in this connection that seven Negro nurses were employed, and with possibly one exception every one of them did the finest and most effective kind of public health work it has been the privilege of this writer to observe in his twenty-five years experience as a health officer. It has demonstrated more than anything else could the necessity for the employment of competent, industrious, and honorable Negro nurses in at least forty or fifty counties in North Carolina where the Negro population justifies such employment. This is one of the needs of public health work in North Carolina at this time.

One exceedingly conscientious nurse of fine personality and ability succeeded in making contacts with all the midwives in her county, establishing school lunches in several schools that had not been interested before, and in many other ways accomplishing a great deal. The following comment from this nurse, made after she had worked about one month, will illustrate something of what she was doing:

"Through my own woman's club here in our home town, and through two or three personal friends, I have secured funds for ten midwife bags,

fully equipped. Also a friend, who is president of our District North Carolina Woman's Club, has promised to ask the other seven federating clubs in this county for assistance in this work. I am planning to have four local midwife meetings over this county and shall distribute these bags as gifts at these meetings. By this distribution over the county I believe the other midwives will be inspired to get themselves properly fitted. In fact, I am really hoping that by some means I shall be able to secure more bags so that all the midwives of the county may be thus provided for.

When I call my midwife meetings I shall ask some of the influential mothers in each locality to attend, for I believe that will do much to wake folks up to the meaning and importance of this sort of work."

This report may be closed by again quoting the statement of this fine woman, to the effect that the chief importance of this fifteen weeks work as a special nurse project may be said to be the possibility of waking folks up to the meaning and importance of this sort of work.

Typhoid Fever

By D. F. MILAM, M.D.

CASES of typhoid fever in North Carolina are still numerous enough each year to be quite shocking to the uninformed person who has arrived at the belief that it is a disease of the past. True it is that the great majority of cases in North Carolina are not usually in the centers of population, but are in the small towns and open country. There are very good reasons for this, chief of which is that the cities are, as a rule, provided with good central water supplies and with sewers or toilets deemed sanitary. That these conditions do not prevail everywhere in the State is quite evident to one who takes the trouble to observe conditions. With this explanation as to where typhoid fever is occurring in this State it is informing to hear how much is occurring. The toll of typhoid fever in North Carolina for the past ten years is as follows:

Year	Cases	Deaths
1924.....	1,318	270
1925.....	1,192	277
1926.....	1,502	270
1927.....	1,280	226
1928.....	1,073	185
1929.....	861	164
1930.....	1,000	152
1931.....	991	155
1932.....	823	158
1933.....	684	129

While this tabulation shows a very definite improvement, yet the present status is not such as to admit of much rejoicing. One hundred and twenty-nine deaths last year from a disease entirely preventable, and several times this number critically ill and disabled for months. There is much to be done about it, some of it officially, but much of it by the individual himself. I would like to mention briefly the transmission and control of typhoid fever.

Every case of typhoid fever comes from another case (or carrier). The germs enter by the mouth and are discharged by millions in the feces and urine of the infected individual. The disease literally comes of taking bowel discharges into the mouth. Any contamination of hands, linen, water, milk, or other food comes ordinarily from such discharges, and no other source of infection is known. The transmission may be direct from sick patient to well person via contaminated fingers, linens, utensils, etc., or it may be transmitted indirectly through contaminated water, milk, or uncooked vegetables. Even oysters have been implicated when taken from oyster beds contaminated with sewage. Flies may carry the germs from filth to food. In every instance it is a result of filth trans-

mitted from the patient or carrier of the typhoid germ. Typhoid fever is a filth-borne disease.

When an individual is sick with typhoid fever he is not so much interested in control in the community as in recovery from his own illness. Typhoid fever is a severe disease. Even mild cases may have dangerous complications in the later stages. The only sane thing for the patient or his family to do is to get him under the care, the constant care, of a physician in whom they have confidence. This care should be continued throughout the illness and convalescence.

Now, as to **CONTROL**. Typhoid fever is a strictly preventable disease. In this it differs from such diseases as measles and scarlet fever, where the lines of transmission are from human to human through nose and mouth discharges. Control of filth will control typhoid fever. The following measures are the chief items in this control:

1. Bedside Prophylaxis. Since the patient is a source of new cases of typhoid fever, the following precautions should be taken:

a. The patient should be isolated in a screened room out of contact with others, except the doctor and nurse.

b. All discharges are infective and dangerous. Feces should be covered with chlorinated lime or unslaked lime for one hour before disposal. To urine add an equal amount of bichloride of mercury (1:500 dilution) or carbolic acid (5 per cent). Dispose of excreta so flies do not have access to it.

c. Linens and bedclothes should be immersed in a solution of bichloride of mercury or carbolic acid before laundering, or else boiled with soap and water.

d. Separate dishes should be used by patient and sterilized with boiling water after each meal. Milk bottles should be kept out of the sick room.

e. The hands of attendants should be thoroughly cleansed after each handling of the patient.

f. On conclusion of the case a generalized cleaning with soap and water should be resorted to, this to include walls, bed, and furniture.

2. Vaccination. All persons coming in contact with the case should be immunized with typhoid vaccine.

3. Sanitation. If not already provided, a sanitary privy or water-closet should be installed at the house where a case of typhoid fever occurs.

4. Water. As a vehicle of typhoid infection water should always be considered. Most cities have well-protected supplies. A rural home should have a well safe from surface or ground pollution. In case of uncertainty, water can always be sterilized by boiling.

5. The Milk Supply of every home should be above suspicion; if from other than an owned cow, only a quality equivalent to Grade "A" should be accepted. Pasteurized milk is recommended where available. Large epidemics of typhoid fever have been traced to milk contaminated by typhoid carriers.

6. Individual Prophylaxis. Health officers cannot always surely protect an individual against filth-borne infection. A certain amount of intelligent "health officering" for himself and family is necessary on the part of the individual citizen. These steps are recommended:

The individual should avoid unnecessary contact with all persons sick with typhoid. If in contact or caring for a patient, he should scrupulously wash his hands with soap and water after each contact.

He should provide his home with a safe water supply. Water from unprotected springs or wells and from streams or unknown sources should be considered dangerous, and avoided. Contamination of water may not affect its appearance, taste, or odor.

He should buy for his family only

Grade "A" milk, preferably pasteurized. By insisting on this he will help improve the quality of public milk supplies.

Foods eaten raw should be considered as possible carriers of infection and should be avoided if coming from farms having known cases of typhoid fever.

Typhoid vaccination is recommended for all individuals probably exposed to typhoid fever, but it is em-

phasized that sanitation of environment, of food, and of sick rooms is much more important in preventing its spread.

Now, that is quite an order, but not one beyond the need and capacity of every citizen, and the point is to be emphasized that to abolish typhoid fever such as occurs in North Carolina, much depends on the individual himself, and everything cannot be done by the health officer.

Beware of the Black Widow!

By FREDERICK R. TAYLOR, B.S., M.D., F.A.C.P., *High Point, N. C.*

THIS is not the first appearance of a new department of THE BULLETIN offering advice to those contemplating marriage, despite the rather peculiar title. The black widow under discussion is no human creature—she is a spider of most invidious repute. The State Board of Health has a number of excellent pamphlets describing the construction of various types of sanitary outdoor privies; Chic Sale in his versified account of "The Specialist" has given another viewpoint on the subject; but one of the most truly formidable hazards of the outdoor privy, the black widow spider, seems to have gone thus far largely unwept, unhonored, and unsung.

First, a few words as to spiders in general. Many persons have an unreasonable fear of all spiders, or at least of all of any considerable size. This fear may approach morbid horror. There is no ground for this. Most spiders at worst are a nuisance, and at best are of value in helping to keep down insect pests. Some are of striking beauty, such as the large golden garden spider, which weaves webs of rare geometric design. Even the widely feared "tarantula" of the Southwest, really a variety of trap-door spider, is by no means the desperate character it is popularly supposed to be. A physician of wide experience and thirty years practice in Las Cruces, New Mexico, where the

"tarantula" abounds, has told the writer that he has never seen anyone who had claimed to be bitten by it. There are a few reports of bites in the literature that make one feel that it is hardly a pet to be carried about on one's person, but, in general, that large, hairy, fearsome-looking spider seems to be pretty well behaved.

One of the memories of the writer's childhood is a couple of popular books on spiders written by a Presbyterian minister, Dr. McCook, entitled "Tenants On An Old Farm" and "Old Farm Fairies." Dr. McCook treated spiders as friends of man, worthy of protection as foes of insect pests and of study by nature lovers. If memory does not mislead me, it seems to me that somewhere he stated that he had had himself bitten by practically every variety of spider in the United States known to him, without any serious discomfort. If this is true, it is evident that the black widow was either unknown to him, or, if she ever bit him, he had acquired some degree of immunity to spider bites in general before she got a chance at him. Yet, so far as the general run of spiders go, Dr. McCook's attitude is quite correct, provided spiders are kept in their proper place and the house does not get full of cobwebs. The black widow, however, is a creature dangerous to man, that should be destroyed wherever found, for she is the most venomous spider in the

United States and her bite causes extreme suffering.

This spider has a number of common names. Some call it the "shoe-button spider," because the abdominal segment, the largest part of the body, looks about the size, shape, and color of a glossy black shoe-button. Others call it the "hour-glass spider" because of a scarlet hour-glass-shaped mark on the under surface of the abdomen. Its scientific name is *Latrodectus mactans*. The spider as a whole is glossy black, and usually has a number of inconstant red and yellow markings in addition to the constant red hour-glass spot described. It is about one-half inch long when full grown. The August, 1933, *National Geographic Magazine* has a very interesting article on spiders, illustrated by beautiful color plates, including one of the spider under discussion. The name "black widow" comes from the fact that the female eats her mate at the end of the mating season, and, so far as is known, only the female bites human beings, thus confirming once more Kipling's observation on "the female of the species."

The black widow usually spins her web in a rather dark place. Her favorite spot of all is in the seat of an outdoor privy, and a large majority of bites have been inflicted on, or near, the genitals of persons using these seats, especially men and boys. The web is without any geometric symmetry of design, being coarse and irregular. While a privy is the favorite spot for these webs, they are also found in cellars, attics, barns, garages, woodpiles, and elsewhere. Bites may occur anywhere on the body of the victim, especially when he encounters the spider in these less common localities.

A strange thing about the bite is that it is not immediately very painful, and there is ordinarily no swelling or redness at its site. Within a few minutes to half an hour, however, the really serious symptoms begin. These take the form of pains starting in the region of the bite and

spreading all over the body, often attaining their greatest intensity in the abdomen, the wall of which may be so rigid that the condition strikingly resembles the abdomen of some acute surgical emergency such as ruptured gastric or duodenal ulcer. Before such symptoms were generally known to result from this spider's bite, surgical operations were sometimes performed on these patients, but nothing was found to explain the symptoms. Unlike the surgical conditions, however, the pains are not limited to the abdomen, but go all over the body, as stated. They may be of the most intense severity, and are associated with muscle spasms and cramps. The victim catches his breath in painful gasps, tosses about the bed, and is evidently in intense agony. Sweating may be profuse. There may be nausea and vomiting, but these are not necessarily present. Many other symptoms may occur in individual cases, such as various types of skin rashes, muscle twitchings, temporary paralyses, convulsions, chills, vertigo, jaundice, etc. Always the patient is in a highly nervous state. The venom is a neurotoxin, i.e., a special nerve poison, and is somewhat similar to that of the dreaded Indian cobra, though fortunately less in amount. It has been used by Indians of the Southwest as an arrow poison, more or less interchangeably with rattlesnake venom.

The treatment available in this part of the country consists of very powerful measures to relieve pain. In Southern California, where the cases of spider bite of this kind are very numerous, convalescent serum is often available, i.e., blood serum from patients already bitten. A commercial antivenin has been prepared from sheep treated with the black widow venom, in Brazil, and may some day be available in this country.

The general outlook for recovery is good, though a death rate of about 4½ per cent has been reported. Most of the deaths are said to have been in children, and Dr. Emil Bogen of California, probably the leading author-

ity in this country on the subject, suspects that some deaths may have been due to unwise treatment by untrained friends, especially when they have followed the dangerous superstition that making the patient dead drunk is the treatment to use. This treatment is never useful, either in spider bite or snake bite, despite ancient popular belief to the contrary. It is, rather, about the most harmful form of treatment that has ever been recommended, and has no doubt accounted for some deaths wrongly blamed on snakes and spiders.

It is strange that even medical books have, until very recently, had little to say about this very striking group of serious symptoms due to the bite of the black widow spider. Bogen states that the first case reported in the United States was in 1720. Over one hundred years ago Dr. Adner Hopton of Clinton, N. C., reported a case. The first fatal case is said to have been recorded from the same locality by Dr. J. M. Dick in 1889, being reported in *Insect Life* for January of that year. Most modern medical textbooks, however, pass over spider bite in silence, including even

some of the large encyclopedic works in several volumes. The probable reason for this is that most of the medical authors live in large cities where such spider bites are rare or unknown, and where outdoor privies are not permitted. That the condition is a familiar one to rural physicians was shown by the large number of them who discussed a paper read on the subject this year before the Medical Society of the State of North Carolina, many men citing many cases from their own experience.

Recovery from one bite is said to confer a lasting immunity from the effects of subsequent bites. The suffering from the first bite, however, is extreme, and danger to life, while not great, is a reality, so no one should allow himself to be bitten just to become immune. On the contrary, everyone should make every effort possible to search out and destroy the black widow and her webs, and to encourage the natural enemies of the spider, especially birds. Privies should be inspected daily during the warm season and in the fall for cobwebs, these destroyed, and all black widow spiders killed.

Appropriations and Public Health Work

By FRANK SMETHURST in *News and Observer*

"I AM not complaining about the appropriations given the State Board of Health," said Dr. Jas. M. Parrott, secretary of the board, pointing to significant increases in the disease and death rates in North Carolina.

"However, these figures show to an appalling extent what North Carolina may expect unless adequate provision is made for public health maintenance."

Some of the most illuminating of those figures indicated a startling increase in the deaths of infants under one year of age. The last five months period compared to a similar stretch of 1933 showed an increase from

2,144 to 2,563 in this group of deaths.

Dr. Parrott probably means that he is not disposed to elevate the needs of the State's machinery for public health over the needs of other agencies and other means.

But somebody ought to complain. Dr. Parrott himself has a just cause. He heads the agency which has suffered very considerably from a wholly unfortunate and shortsighted scheme of economy. In such facts as he now presents he sees the reflection of a policy as a result of which there can only be continuing and aggravated distress.

Dr. Parrott can complain eloquent-

ly and in point that North Carolina can suffer nowhere so dismally as in indifference to the requirements of a sound and broad public health policy. He can complain that the shortest of short vision was embraced in failure to discriminate under the urge of economy between the essential services of human well-being and the services that are merely desirable or are only politically expedient.

He can complain that, in spite of all our supposed enlightenment, careful exploitation has accustomed the people to think in terms of millions for highways while they still begrudge thousands for ventures in health.

And it isn't that public health has not been reduced to practical equations showing easily measurable returns upon its investment. I believe

it is because public health has always been a tentative sort of compromise between private practice and public service.

We have had in North Carolina able public health men. We have them now. But we need some good complainers. We need men with whom public health is a passion to be served without limit and without fear of offending the politically minded. We need complainers who will preach health and public responsibility for it with the same earnestness and intelligence and effectiveness by which the evangels of good roads converted North Carolina from mud to concrete.

We need complainers who will not rest themselves nor let others rest until public health along with the public schools is the major concern of the State.

Toothache

By WALLACE F. MUSTIAN, D.D.S., M.S.D., Warrenton, N. C.

THE common toothache is a condition which dentists are frequently called upon to relieve. The drugs usually employed in relieving toothache are oil of cloves, iodine, creosote, and carbolic acid. They may be used alone or they may be employed in various combinations. The best results are obtained by placing the medicine directly into the tooth cavity by a dentist. However, if his services cannot be had at the time, the individual suffering may diminish his pain or possibly relieve it entirely by placing within the aching cavity a small pledget of cotton dipped in oil of cloves and then partly dried. If the pledget of cotton cannot be placed directly into the cavity, it often gives relief by putting it on the gum over the aching tooth and leaving it there for about two minutes. This process may be repeated if not relieved. However, the oil will destroy the tissues if allowed to remain too long. Oil of cloves is the drug preferred by most dentists

and is probably the one least calculated to injure the gums.

Tincture of iodine applied over the aching tooth often gives relief. The ordinary medicine cabinet variety is generally too strong to apply to the gums. Tincture of iodine contains alcohol, which evaporates upon standing, making the solution too concentrated for use in the mouth.

Beechwood creosote is another drug which gives good results, but it also should be introduced into the cavity by the skilled hand of the dentist and sealed by means of a temporary filling.

Carbolic acid on a pellet of cotton is also efficient, but like creosote and iodine it is dangerous for the patient to attempt to use it. The patient should rely upon the technical skill of a dentist for the application of these drugs.

The above drugs are constituents of most commercial toothache gums found at drug stores. These gums are usually not dangerous in the

hands of the sufferer himself. Small amounts should be used and placed directly into the cavity of the tooth. This will burn the gum tissue and do much harm if carelessly used for relieving toothache.

In this connection it may be stated that aspirin in doses of one or two tablets taken by mouth will often reduce severe pain or aching teeth as well as bodily pains. Here it may be stated that the promiscuous use of aspirin is not advisable. Its use should only be temporary. Aspirin

may relieve the pain, but it does not remove the cause.

It is well to remember that when a nerve is once actually exposed and aching, when a drug is applied which relieves the pain, the drug usually kills the nerve, resulting in it forming an abscess if not removed.

[EDITOR'S NOTE: The sum and substance of this question is, see a good dentist, and see him often, if you would take care of your teeth and protect your health.]

CONSULTANT IN VENEREAL DISEASE CONTROL RESIGNS



MR. W. D. RILEY
of the United States Public Health Service

For about two years Mr. Riley has been Consultant to the State Board of Health in Venereal Disease Control Work. He has been very successful in organizing facilities to aid in combating the spread of venereal diseases. He has resigned to go into private business, with headquarters at New Orleans.

DR. MILAM TRANSFERRED TO PANAMA CANAL ZONE



DR. D. F. MILAM
of the International Health Board

For two years Dr. Milam has been "loaned" to the State Board of Health. He has been recently transferred to the Panama Canal Zone. Dr. Milam has been Acting Epidemiologist. He has also rendered material aid to the department of Health Education. His service to State Health Work has been worth a great deal.



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SCHOOL DAYS ARE HERE AGAIN

FOR the next eight months nearly one million children and some twenty-two thousand teachers will be assembled every school day in North Carolina. More than a tenth of these children will be in school for the first time. It will be to them a new and bewildering world. No fewer than another hundred thousand of them will be grade repeaters. These grade repeaters are composed of many types of children—some of them bright and normal children from good homes, but who lost out because of illness last year. Most of such loss of time is preventable, if they could live in an ideal world. Included in this group are the problem children from disturbed or broken homes. In it may be found also the children with defective vision, hearing, teeth; the undernourished and diseased children. The teachers will be more harassed than usual, especially in the lower grades, because of overcrowding.

In the beginning we hope special efforts may be made by the teachers to locate those children with physical handicaps, that they may be treated; to find those who may be suffering from insufficient food, that provision may be made for them; and to classify those with poor vision or hearing so that they may be given the advantage of good position in the schoolroom.

Above all, we hope that a good safe water supply and approved toilet facilities may be provided, and that the principal and janitor be "sanitary minded."

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly **THE HEALTH BULLETIN** which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Scarlet Fever
Cancer	Health Education	Smallpox
Constipation	Hookworm Disease	Teeth
Chickenpox	Infantile Paralysis	Tuberculosis
Diabetes	Influenza	Tuberculosis Placards
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Don't Spit Placards	Measles	Typhoid Placards
Eyes	Pellagra	Veneral Diseases
Flies	Residential Sewage	Water Supplies
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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine	5 to 6 months; 7, 8, and 9 months; 10,
monthly letters)	11, and 12 months; 1 year to 19 months;
Minimum Standards of Prenatal Care	19 months to 2 years.
Breast Feeding	Diet List: 9 to 12 months; 12 to 15
Infant Care. The Prevention of	months; 15 to 24 months; 2 to 3
Infantile Diarrhea.	years; 3 to 6 years.
Table of Heights and Weights	Instructions for North Carolina Midwives.

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Notes and Comment

SEPTEMBER morning means again this year that about one hundred thousand six-year-old children will enter school for the first time. Every school district in the State will be responsible for starting some of these children on the right road to health and to education, or otherwise.

This is the fifth school year since the beginning of the present so-called depression. Therefore, whatever impressions these children have received during the past five years, which constitute five-sixths of their lives so far, has been in an atmosphere of pessimism and suspense and fear and anxiety. No one is capable of predicting what effect this may have on the future of these children. Every sensible person, however, will agree that the effect will not be a favorable one.

For the first two or three years of this period of financial distress many people had reserves in savings accounts at the bank or in other forms of property which have since vanished into the air. Naturally during the first two or three years of this period, owing to savings and the hope that times would soon be better, the effect on children's health could not be so marked as it has been for the past year.

In spite of the worthy efforts of the Federal Government and the State and local governments, there is no doubt but many children have been living on food insufficient in quantity and deficient in quality to satisfy the needs of growing children. Epidemic disease has, if any-

thing, been more prevalent among children the past year or two than in the previous several years. Right or wrong, a majority of people believe that good health means better resisting powers to the ravages of ordinary diseases, communicable or otherwise.

School this year for these hundred thousand children will be entered upon under more difficult circumstances than for any group of children in the past ten years in this State. Teacher loads have been increased, necessitating intense crowding in most schoolrooms, particularly for the smaller children. With lowered salaries and increased living costs, the teachers, or most of them at least, will also labor under greater disadvantages than they have before in many years.

The concern expressed here is for the health of the children at this most important period of their lives. Overcrowded schoolrooms and long hours mean greater exposure to communicable diseases and a greater strain on their nervous and mental energy. These conditions are bad for the children. In order to make the best of the situation, it is hoped that all the teachers in the State will draw a little more heavily on their store of patience and tact, and help the children to become adjusted to their new world.

It is also hoped that the teachers, in the beginning of schools, will immediately make an effort to discover the children who may be suffering from any kind of physical defect or condition which may be remedied. It is particularly hoped that they will

learn which children may be insufficiently nourished at home. When this information is in the hands of the teacher, the final and most important action will be to organize the community in such a way as to see that all the children having remediable defects may be treated, and those who need additional food may have it provided. Undernourishment should not be permitted to take its toll in this small group of children this year. It can and should be prevented.

* * *

THE old saying that "every dog has his day" seems to be well illustrated at this time in the world-wide efforts to help the farmer. As an ex-farmer, this writer hastens to say that most farmers need all the assistance they can get at all times. The Federal Government is outdoing itself, as everyone knows, in efforts to create markets and increase prices and better living conditions of the farmer. Naturally, in such a Nation-wide enterprise the scientists could not be left behind in their effort. So, what more natural than for *Science News Letter* to come along a few weeks ago calling attention to the fact that the new knowledge of foods may act favorably to the farmer? *The News Letter* quotes no less an authority than Prof. H. C. Sherman of Columbia University. The occasion for Professor Sherman's pronouncement was an address before the American Home Economics Association.

Professor Sherman is the authority who made popular the conception of protective foods in the diet. He, in his address, emphasized again the importance of this class of foods in individual nutrition. He stresses also the importance of a knowledge of the value of these foods reaching the people everywhere. These foods are milk, fruit, vegetables, and eggs. Professor Sherman says they are called "protective" because their rich supply of vitamins and minerals will, if eaten in sufficient amounts, protect the consumer against the great-

est dangers of dietary deficiencies. He holds that these foods in the diet also help the body to protect itself against several kinds of infections.

Professor Sherman did not enumerate any of the infections which might be resisted by consuming plenty of the protective foods. It is presumed that he had reference to such conditions as pellagra, which may be prevented by consuming a varied diet consisting of plenty of the aforementioned protective foods. However, as Professor Sherman is not a physician or an epidemiologist, our readers are advised against the idea that they may be protected from any ordinary infectious communicable disease, as measles, for example, through the simple expedient of consuming milk, fruit, vegetables, or eggs, no matter how important these elements are in the diet. The fact is, Professor Sherman himself in the same address is quoted by the *News Letter* to the effect that the place of eggs in the diet and the question of how much the protective foods are needed to get the full benefit which they are capable of yielding are two points on which further research is needed.

Seriously speaking, Professor Sherman has done a great deal in his work to lead the way as a pioneer in discoveries in the field of nutrition, which will be invaluable to the human race for years to come. It may be repeated again that Professor Sherman's researches and his experience and the attention given to such matters by such publications as the *Science News Letter* illustrate the importance of the doctrines this journal has been preaching for twenty years, that a varied and balanced diet is necessary to good health. Such diet must not fail to be available, and it must be consumed. When a balanced diet is not consumed over a long enough period of time, such diseases as pellagra may follow.

The readers of THE HEALTH BULLETIN are advised to study for themselves the great question of nutrition and of foods, and to beware of the fads, food faddists, or extremists in these

fields. Some of them are just as fanatical and as dangerous as the antis who oppose such meritorious protective measures as vaccination against smallpox.

Professor Sherman rightly says, "There is sound health reason for and no sound economic reason against the growing prominence of the protective foods in the general food supply." Where all this is calculated to help the farmer is that when the hundred and twenty million people of these United States definitely reach the conclusion that a greater quantity of milk, fruit, vegetables, and eggs are necessary in the daily diet, the people who produce these articles for sale will have a greatly extended market.

* * *

A FEW years ago, as some of the regular readers of THE HEALTH BULLETIN may remember, a food faker of the first magnitude blew into Raleigh. He was greeted by the Chamber of Commerce and most of the luncheon clubs, all of whom opened their arms and extended him a warm welcome. He had just conquered Charlotte and Greensboro and all but came to Raleigh accompanied by a brass band.

A report of his first luncheon club address, after he had set up living quarters in Raleigh and after the address of welcome had died out and he had settled down to his regular business, was published in the Raleigh daily papers. The editor of THE HEALTH BULLETIN read some of his statements and immediately decided that he was a faker. The editor conveyed his opinion to two or three medical friends who were on the program committee of one of the luncheon clubs, and they decided to back the editor in a little investigation before the day came for him to address that particular club. One of the statements that impressed the editor was that "white flour is poison to the system and should not be consumed under any circumstances," and that "if a person consume a combination of green peas

and apple pie or ham and white potatoes at the same meal, the heart (of the eater) would curl up and die."

Investigation proved, as suspected, that he was a big old fraud and faker, riding high and wide and handsome until exposed for what he was, which resulted in his slipping out of town in the middle of the night, glad to get out without being put in jail.

This occasion is brought to mind on reading the account of a report made by Doctor Rehfuss, of Philadelphia, at the recent meeting of the American Medical Association. Doctor Rehfuss had experimented on patients in the hospital in order to set up a straight-out scientific refutation of such foolish statements, which have a way of recurring everywhere.

The statement that meat and potatoes may not be eaten safely at the same meal, as contended by food fad-dists, is inaccurate in every particular. Doctor Rehfuss declared in his report that "There is no evidence, either in scientific literature or in our investigation, to lead us to believe that proteins such as meat and carbohydrates such as potatoes are incompatible in the stomach." If food fad-dists who make any such foolish claims were honest with themselves and the public, they would explain that often people eat too much of such foods and therefore suffer from discomfort, but that the combination has nothing whatever to do with it. Doctor Rehfuss very properly concludes that "The teaching that these two classes of foods cannot be eaten together is dangerous because it may lead to serious undernourishment and lighting up of tuberculosis and other old infections."

It is the same old story. When people fall for extreme notions or fads unjustified by facts or experience in the affairs of daily life, they may expect to be humbugged and to suffer the consequences. Almost always the exponents of fads and cults of every kind have something to sell, regardless of whether it is beneficial or harmful to the fellow who is fool

enough to buy it. The chief stock in trade of such people is that they pose as "experts" and are in too many cases, by entirely too many people, accepted at their own evaluation without any question or investigation on the part of the victims until it is too late. This writer heartily subscribes to the definition recently given by a New York printer when cross-examined by the opposing lawyer in a trial. The printer was asked if he knew what an expert was. He replied that he did, to wit, "An ex-

pert is somebody from out of town."

In the future when one of these "experts" comes along and tells you that your heart will "curl up and die" if you eat good old eastern North Carolina Irish potatoes with Onslow County ham and Wilkes County apples, simply tell him he is a liar, and that you have the authority of the American Medical Association for the statement. If you do not believe this statement, the next time you see your family physician, ask him what he thinks about it.

Shoe Gossip

A Talk Intended for High School Girls

By KATHERINE ROYSTER,* *Woman's College, Greensboro*

IF shoe tongues could talk, many would be the shoe tragedies that would greet us from the front pages of our newspapers tomorrow morning. This sudden publicity of the shoe tongue would equal what we imagine would greet King Tut if he were to arise from the dead. Speaking of King Tut, I wonder just what he would be most startled over if he were to meet a modern American business man or woman. Dress? Speech? Certainly; but my imagination pictures an astonished expression of dismay and curiosity on the face of the famous Egyptian king as he viewed the shoes of our generation. He would probably ask what instruments of torture the poor creatures were wearing on their feet!

Nothing is more torture to an individual than trying to walk in a pair of misfit shoes, and what a picture the hobbling shoe wearer makes! Woods Hutchinson in speaking of our feminine foot is not very complimentary when he says, "It is distorted into the resemblance of a link of sausage pointed at one end, or a banana in a convulsion." You may not agree with Dr. Hutchinson on convulsions of the feet, but I'm sure you have

had at least one embarrassing encounter with the corn-sufferer who invariably sticks his feet in the aisles to halt the hurrying passer-by. We mumble an apology and duck our heads to avoid a mind-your-own-business-and-stay-off-my-feet stare. But think what misery, pain, and embarrassment could be avoided if everybody wore the proper shoes at the proper time (and incidentally kept their feet out of the aisle)!

The proper shoe for anyone is the comfortable shoe. This shoe should have a semi-round or medium box toe, a broad leather or rubber heel, and be one and a half to two and a half sizes larger than actual measurement. This extra room allows the feet plenty of space in which to support the weight of the body without cramping the feet. To assure most comfort, the shoes should be longer than the toes, so that the toes do not touch the ends of the shoe. Stockings which are too short, or otherwise a misfit, may do as much harm as do shoes which are too short. The shoe you choose should conform as near as possible to the shape and contour of your foot, rather than your foot being forced to suffer the torment of

* Junior major in Physical Education.

trying to conform to the shoe. We are prone to be a bit sensitive about the number last we wear, but remember no one knows but yourself, and if they did they would not be interested in remembering it. We are not at all embarrassed over wearing a large head size, but if our feet require anything above a size four we are mortified to tears!

A young lady would be sharply criticized and embarrassed if she were to appear on a dance floor in Oxfords. She would use equally bad taste in attempting tennis in spike heels. Yet this same young lady may go to school all day wearing high heels and be neither embarrassed nor criticized, although she is doing herself more harm. All day she has placed the greater part of her weight on the front or ball of her feet, throwing her body forward and out of line with its normal upright plane. The constant use of high heels as walking or working shoes may have several ill effects. The anterior arch between the metatarsals of the foot may be lowered, thickenings and callosities on the ball of the foot may appear, fatigue, irritability, and backache are likely to result. Habitual high-heel wearers contend that they cannot stop wearing high heels because low-heel shoes hurt their feet. In that case they have worn high heels so long that the muscles in the back of the leg have become constricted and shortened from non-use and a gradual change to low heels must be made. If this change is not made, high heels will have to be worn and more foot trouble will result.

The advertisements encourage one to buy shoes for health, vitality, and beauty's sake. How are we to judge these qualities? The American Indian settled this question easily with comfortable and beautifully beaded moccasins. This soft deerskin-type shoe gave natural freedom to the Indian's foot. The Indians were also noted for long tramps and hunts, which they often performed on bare feet. On special long all-day hunts the Indians have been known to

cover many miles without apparent fatigue. Yet today the Indian would not last many hours on the hot pavements of a modern city. Today, one can neither wear the moccasins of the Indians nor go barefooted, but one can buy shoes of flexible leather, low heels, and space for crowded toes. However, many doctors recommend that the majority of people would be better off if they did go barefooted at least one hour a day. I am not suggesting that you stop buying shoes, but you might try this in private if you wish—as the only place bare feet are socially correct is on the beach.

We are inclined to resemble the peacock who stood before the mirror admiring his beautiful plumage and never once glanced at his feet. We spend hours fixing our finger nails just the right tint, putting every curl on our head in place, or smoothing out the least wrinkle in our dress, but we seldom stop to give our poor feet more than just a hasty scrubbing. The toenails should be cut regularly and ingrowing nails should have cotton packed under the edges, rather than the nail being cut out or scraped. Hard or calloused places on the feet should be noticed and the shoes examined to find out what is causing the rubbing. Sometimes a stocking is wrinkled, causing the "bungled" spot which rubs. Laced shoes are most comfortable and assure less pressure on the feet than buckle or strap shoes.

Fashion has set a pace which we are ever eager to follow. History bears this out in accounts of the shoes worn during the reign of Edward IV of England, when long pointed shoes were worn by men and women. In the reign of Henry VIII big cumbersome shoes were stylish because the king had a gouty foot and his courtiers wore huge shoes so the king would not be embarrassed over his deformity. This fad reached such a stage that a law had to be passed limiting the length of shoes, because the courtiers found themselves unable to walk or kneel with

ease. Other accounts tell of the boots of Charles First's time, which had wide tops requiring a wide stride and swaggering walk. We can be glad that our shoe styles today do not require the high-top shoes of the Venetian ladies or the bound feet of the Chinese, although they do try to put

us on stilts! If you too must answer the call of Lady Fashion, do so in a comfortable manner and base your choice not on extreme cut, but on comfort, suitability, and need of your feet. A conscience is a good guide in many instances, but in buying shoes I would let my feet lead the way!

Pleurodynia

By J. C. KNOX, M.D., State Epidemiologist

EPIDEMIC myalgia, epidemic pleurodynia, otherwise commonly known as "devil's grip," has recently been given much attention by the newspapers. Many inquiries have been made at the State Board of Health as to its source, prevalence, geographical distribution, clinical course, method of spread, and what treatment is most efficacious.

The earliest written accounts of this seemingly new disease date to the year 1872, when two Norwegian physicians, working independently, described outbreaks. This new disease was called acute muscular rheumatism. Even in Norway diseases have the peculiarity of acquiring local names, and it was commonly known as the Bamle disease, so-called for the place where the first case occurred. Two years later a Danish physician reported two epidemics which occurred in Iceland in the years 1856 and 1863. This physician gave the disease the name "muscular rheumatism." These outbreaks antedated those described by the Norwegian physician, though reported at a later date.

Since these earlier reports the disease has been observed in the United States and other countries. The first appearance of pleurodynia in this country was recorded by Dabney in the year 1888. This outbreak occurred in Virginia and consisted of twenty-nine cases. These cases occurred within a ten-day period, and at this time became known as "devil's grip," due to the very severe pain

which accompanied deep inspiration. The next appearance we find of this condition was observed in 1923—thirty-five years later. As previously, the outbreak was in Virginia and was confined to the northeastern portion of the State. The term used by its observers to describe the outbreak was "epidemic transient diaphragmatic spasm." Then again in the next few years, 1924 to 1926, small epidemics were observed in New York, Pennsylvania, Massachusetts (Cape Cod), and Tennessee. In 1933 a number of cases of pleurodynia were observed and reported in Boston. The investigators went rather thoroughly into the study of these cases and contributed very valuable observations to our present knowledge. Outbreaks have been reported in England, Denmark, Sweden, Finland, Germany, and Portugal, which indicate a rather wide distribution. The descriptions given by foreign observers tally very closely with those made by workers in the United States. The most recent outbreak of extensive size occurred in Denmark in 1930. Here the illness is called "The Bornholm Disease" for the island on which the outbreaks occurred. Over four thousand cases of this illness were reported to the health authorities in Denmark in 1932. The epidemic afforded a most excellent opportunity for a most careful study of the peculiarities of this disease.

Epidemics of this little-known condition are occurring in various sections of North Carolina. This disease is not reportable to the State Board

of Health. The actual number of cases of illness to occur since the beginning of the epidemic is, therefore, purely a matter of guesswork. The greatest number of cases seem to be in the eastern part of the State. However, there are increasingly frequent reports from the middle and western sections.

There is a very definite seasonal incidence to this disease—all observed epidemics occurring in the summer months—usually June and July. Due to the fact that all epidemics occur during these months, there has been much speculation as to the cause of the disease and the manner of spreading. Since summer is the season when most biting insects are prevalent, e. g., mosquitoes and sand flies, suspicion has been directed towards them. One investigator offered to classify it as a malaria-like infection, for the reason that he found a parasite in the red blood cells which resembled the malarial parasite when the blood of two patients was examined microscopically. There has been a failure to find such parasites by other observers.

The two sexes are about equally susceptible. Cases are reported in both the white and the Negro races.

There seems to be a definite age prevalence or susceptibility. The majority of cases occur in the younger age groups, from five to eighteen years. Cases do occur in the younger and older groups, but not so frequently. The youngest patient reported as having pleurodynia was a nursing infant of four months. The oldest one was well past middle life. As in any other disease, therefore, we find extremes in age limits in reports of pleurodynia.

The manner of spread has not been worked out satisfactorily. The frequency with which several members of the same family are affected leads one to suspect that the spread is by direct contact with an individual ill of the disease. In some instances the entire family has suffered from an attack, the highest recorded number being ten members.

The illness is characterized by a sudden onset, "like a thunderbolt out of a clear sky," two or three days after exposure, usually with severe pain in the upper abdomen and lower chest. The right side is most frequently involved. The lower portion of the front part of the chest is often the site of the pain. Deep breathing aggravates the pain. The respirations are very frequently quite shallow, thus acting as a protection against the pain. The suddenness of the onset, which is nearly always initiated by this severe pain, is the most characteristic part of the disease. There may be such severe pain in the abdomen as to mislead one into believing that there is an acute abdominal condition which might require surgical intervention. The temperature is elevated, usually running anywhere from 100 to 104 degrees. This condition may be accompanied by a chill or chilliness. The temperature usually subsides within twenty-four to thirty-six hours. The pain becomes less acute with the fall of temperature. The patient may continue to improve until complete recovery has taken place. However, there is frequently a subsequent paroxysm which occurs within twenty-four to thirty-six hours after the first. The second is usually less severe than the first. Convalescence may be rather prolonged, running into a period of two or three weeks, characterized by persistent discomfort and pain on deep inspiration.

Complications in this country have been nearly negligible, but are frequent and more serious in the Scandinavian countries.

There have been no deaths recorded as due to the disease.

The treatment and management of the individual case should be directed by the family physician.

CORRECTION

Dr. R. E. Fox is the name of our new Assistant Director of County Health work, and not Dr. P. G. Fox, as was erroneously stated in the August HEALTH BULLETIN.

Asset—Responsibilities—Remedy

By CARL V. REYNOLDS, M.D., *President, North Carolina State Board of Health*

WHAT emotion is greater than love? What love is greater or more enduring than the desire for motherhood and fatherhood? What greater joy and genuine happiness is given us than through our children? What father, mother, or grandparent would hesitate to sacrifice his or her life to save the life of their child or grandchild?

There are three essentials that enter into the guardianship of the child—your brain, your love, your conscience; neither predominating control, but all three interdependent and coördinating. With this in mind, and appreciating the fact that "we cannot live unto ourselves alone," it is essential to make a unified effort to make a place in this world for our children, and the essentials depend absolutely upon their moral, mental, and physical fitness, this augmented by environment, culture, and climatic conditions. The future of the State depends upon the preparedness of our children—then surely that which will bring the greatest happiness, contentment, and appreciation of our children to the parents and the grandparents should be our ideal.

Yes, the welfare, the future of the State, depend upon the attention given to the child—her greatest asset. Through mental and physical fitness we improve our moral stamina, and through it a greater resistance to dissipation with its many ramifications that lead to so many social disorders. What problem, then, is more alluring than to work for the betterment of child welfare, which ultimately enhances a hundredfold the manhood and womanhood of the State, and carries with it happiness, comradeship, prosperity, less morbidity (sickness), lower mortality (death).

Upon whom does this responsibility rest? First, the parents; second, the guardian; third, local, State, and

Federal authorities; fourth, the physician; and fifth, Public Health.

How are we to improve conditions? The procedure, as I see it, is—to every child born a fair chance should be given. The proper place to start is, first, the child in utero (before birth), meaning prenatal care. Second, the child at delivery, meaning a competent obstetrician. Third, child immunization, meaning physicians health-minded, all acting with a community interest, striving to prevent rather than cure. Fourth, the child suffering from non-immunizable diseases (correctible or non-correctible), meaning prompt correctible or curative measures.

It is American to place every child born in position to combat the inroads of disease equal to that of his neighbor, a physical and mental fitness to compete for his place in the world.

This can be accomplished by parents assuming responsibility to see to it that their child is protected against preventable diseases and has prompt attention in case of illness. This is a duty first to their child and then to the community. Second, by guardians assuming the same responsibility as parents. Third, by local, State, and Federal authorities assuming responsibility for funds adequate to take care of, and the responsibility for, the proven indigent in coöperation with the medical profession. Fourth, by physicians, who should be the family's health-master, assuming responsibility to advise and insist on measures to keep well or get well. Fifth, by Public Health officers assuming the responsibility of leaders in the educational program by bulletin, press, radio, and field work, leaders in general sanitation work, and supervision and control over all.

This procedure, once set up and enforced, will give to every child born a sound mind and a sound body

to compete for his place in the world, will produce the best medical care, will lessen the cost of medical care, and will prevent State and Federal medicine.

Ignorance, misdirected fear, prejudice, and the greatest of all offenders, procrastination, are the outstanding causes that prevent our children from being protected against the preventable diseases and correcting the correctible diseases.

The physicians have, since the beginning, been zealous in their efforts to prevent the preventable, correct the correctible, cure the curable, make the incurable comfortable. Never have they, nor never will they, turn a deaf ear to the worthy. The profession's heritage is a life of service, and they will not falter now. In the past they have been sought for advice. In the future they should become the family health-master, and advise, yes, insist, on ways and means for the prevention of disease and the preservation of health, thereby anticipating the call rather than awaiting the call.

The physician must realize that he, too, has a definite duty to perform. The State should finance the indigent.

The parents should assume their responsibility. The Public Health Department should be the advance agents in education and prevention, first in an advisory capacity, and, where it is to the best interest of all, it should be clothed with more authority. In other words, the health authorities should be empowered to prevent an outbreak of disease, rather than control or correct it after it is upon us.

Through the coöperation of the above units of health control the child should be placed in the best possible condition during the pre-school age. The most effective law—or regulation, if you please—would be the requirement that every child should be required to be examined and corrections made previous to entrance to school.

We lost by death in 1933, maternal deaths, 505; infant deaths (under one year), 4,982; diphtheria, 198; whooping cough, 197; typhoid fever, 129; tuberculosis, pulmonary, 1,922 (look after the children and lessen this mortality); smallpox, 0.

It is high time that we save certainly one-half of the lives unnecessarily lost.

Ragweeds and Cockleburrs

By UPTON G. WILSON

WE do not know the mind of the Infinite; neither do we pretend to be able to interpret the will of the Father of the Universe, but it does occur to us that one of the grossest slanders ever perpetrated on the One whom we have been taught to regard as the embodiment of love is the frequent assertion that it has pleased Him to remove from earth some tender and unfolded bud that might have blossomed into splendid manhood or noble womanhood.

This slander becomes the more reprehensible when it is made in referring to the passing of some child that was denied the protection that medical science has made possible for it. The child may have died of diphthe-

ria because of the failure of its parents to have it inoculated against this disease, or it may have died because its parents negligently permitted it to eat improper food, or it may have died of any one of a number of preventable causes. But more often than not the blame is placed on God.

We are expected to believe, it seems, that God had marked the child for His own and had been pleased to take it to Himself in His far-away abode. We wonder, however, if it wouldn't have pleased Him more if those responsible for the child's birth had safeguarded it more securely. We do not have much patience with those who seek to make God responsible for their neglect.—*Reidsville Review*.

Compulsory Diphtheria Immunization By the Private Practitioner

By P. P. McCain, M.D., President, North Carolina Medical Society

DURING the last five years there has been in North Carolina a yearly average of 237 deaths from diphtheria and of approximately 3,000 reported cases. Since the use of toxoid in the place of toxin anti-toxin has made immunization entirely safe, with no danger of even minor complications, is it any credit to modern medicine and to our present state of civilization that we allow this absolutely preventable disease to continue to exact such a terrible toll?

Comparatively few children are being immunized, and a good proportion of these few at the pre-school age of five and a half or six years. Fifty-three per cent of all reported cases and 86 per cent of all deaths from diphtheria in North Carolina during the last five years occurred in children under six years of age. It is now universally recognized that the best time to immunize against diphtheria is at the age of six months. We feel that the failure of North Carolina parents to protect their children is not on account of prejudice, but because of indifference and lack of proper information.

Is it not more the responsibility of the family physician than anyone else to see that the parents of the families whom he serves are informed of the dangers of diphtheria and of the simplicity and effectiveness of the modern methods of protection? Will not the private practitioner who serves not only as the physician for their ills, but also as the protector of the health of the families under his care, increase both his prestige and his income?

We heartily commend the example of one of our present Councillors who makes it a practice of informing the parents at the time of delivery of the need of protecting the child against

diphtheria and instructs them to bring the child to his office when it reaches the age of six months for toxoid injection. We understand, too, that most of them take his advice. If this practice were the rule, and if anything like all the approximately seventy thousand children born annually in North Carolina were delivered by physicians, the problem of diphtheria would soon be solved.

Under present conditions, however, there seems little hope of eradicating the disease unless immunization is made compulsory. And why not? There are local laws at various places requiring school children to be immunized against diphtheria and smallpox. There is a State law requiring physicians and midwives to instill silver nitrate into the eyes of the new-born. There is a law requiring that children be sent to school. Why not a State-wide law requiring the protection of their health and of their lives from diphtheria?

North Carolina is justly proud of being the first State in the Union to rid its cattle of tuberculosis. Would it not be a source of equally much pride if we could be the first to rid our children of diphtheria?

Would it not be practicable to enact and to enforce a law requiring the immunization of all children in North Carolina by the age of one year, embodying the following provisions:

1. That the State Board of Health call the law to the attention of the parents or guardian when the child is six months old, and that suitable literature be sent with the notice explaining the safety and the effectiveness of the modern method of immunization.

2. That by the time the child is one year old the parents or guardian be required to furnish the State

Board of Health a certificate signed by a licensed physician that the immunization had been completed.

3. That those who are unable to pay a private physician for this service be required to secure a certificate to this effect from the Superintendent of Public Welfare.

4. That the County Commissioners be required to arrange for the immunization of the children of the holders of such certificates either by private physicians, at perhaps a special rate, through an arrangement with the County Medical Society, or by the County Health Officer.

5. That failure to comply with the law be punishable by fine or by fine and imprisonment.

6. That enforcement of the law be the responsibility of the regularly constituted county authorities upon notice from the State Board of Health that the parents or guardian had failed to comply.

With a period of six months after receiving the notice in which to raise the small amount of money necessary, would there not be exceedingly few parents who could not pay their family physician for this service?

Would they not also want their other children who were more than one year old protected? Would not the public through the operation of such a diphtheria law become educated to go to their private physicians for the immunization of themselves and their children against other diseases?

We believe that it would be easier to pass and enforce such a law in North Carolina than in any other state. There are fewer foreign born, fewer adherents of peculiar cults, and probably a larger proportion of our population who are coöperative in health matters than in any state in the Union.

In order to secure the passage of such a law the physicians of the State will have to work for it individually by contacting their respective representatives in the next Legislature and by securing the endorsement of county and district medical societies. We believe that we would have the hearty coöperation of all the lay forces who are interested in child welfare. Would not the beneficial results more than repay the profession for any effort which is required?

Divorce No Responsibility of the Health Department

A FEW of the poorly informed people of the State have complained on occasions that the health departments are encroaching in the field of private practice and the activities of such health officers should be restricted. None of the health officers, however, willingly undertake any part in the practice of medicine unless they are compelled to do so by circumstances over which they have no control. It remains, however, for Mrs. Ruth O'Briant, the Person County health nurse, to report a rather unusual request coming to her. Mrs. O'Briant reports this in an interesting letter, which we quote as follows:

"Health officers are for everybody, and it is generally conceded that anything can be done by the folks in the Health Department.

"We have numerous calls for 'favors,' but this one strikes me as being good for THE BULLETIN: A colored woman, about forty years old, walked in last week and took a front seat. She asked, 'Is this the Health Department?' I answered in the affirmative. 'Well, I've heard of heaps of folks coming here, and I come to get you to do somethin' for me.' I asked her what I could do. 'I wants to git you to write me out a paper to divorce me from my old man.' She was quite disappointed when she found out that vaccination, education, and sanitation are not in the same group as divorce."

"A Virgin Field"

IN a recent issue of the *Chatham News* an editorial under the above heading appeals to us. The editorial sounds very much like our old friend, Mrs. Sudie Pyatt Miller. Anyhow, it is a good editorial, and we quote it in full below. We do so because for many years we have been fully convinced that a great deal of the chronic ills, if not actual loss of life, in North Carolina result from the consumption of poorly prepared food. Good food is frequently ruined. Some of the relief and welfare officers during the past year or two have repeatedly called attention to the fact that as much of the relief food has been wasted and made unfit for human consumption as has been used to good advantage. We feel, therefore, that anything that will promote the consumption of better prepared food in this State should receive the support of THE HEALTH BULLETIN. The editorial follows:

"There is one field of endeavor in this community that would appear to us to be a virgin field, one that apparently has never been worked, and one that should pay a very good return in dollars and cents to someone who would work it industriously.

"We refer to that of running a bakery and a delicatessen store. It need not be operated as a store, but

could be operated from the home as satisfactorily, we believe. There appears to be a big sale in this community for baked goods. There are ladies in this community that are as good or better cooks than any bakery has. The product of their ovens would have the home-baked taste that would appeal to one.

"It would seem to us that there would be much larger returns from operating such a business than there would be from taking boarders. It would take much less time and be surer profit. It would not take long to figure out the cost of a cake or what not, and then add a profit and you have the selling price. If doubt was had as to the amount of cakes, rolls, etc., to make, orders could be taken and the exact amount to make would be known.

"There are many people in the community who would be only too glad to purchase a cake, pie, rolls, salad, etc. People who now have to make it, go out of town for it or go without it. We have known of such an enterprise being started in a town no larger than this and it has paid good dividends.

"We pass the suggestion along for what it is worth, but we believe that if some enterprising lady would start such a business, provided she was a good cook, she would find that she would soon be the possessor of a profitable business."

Difficult To Learn

SOME days ago a Mrs. Robert G. Smith, suffering with pellagra, drowned herself and her two children in a mill pond in Guilford County. In editorial comment the *Greensboro News* says:

"For those who can read meaning in such an event, the triple dead speak, more eloquently perhaps than the living can, an indictment, a charge against a North Carolina educational system and social organization which has not taught sufficiently that pellagra can be prevented in a simple and cheap way."

This country, and especially the southeastern portion of it, still needs to learn self-sufficiency in food supplies and diet, whatever wisdom there may be in ignoring self-sufficiency in matters of production and commerce.

As *The News* points out, and it has often been pointed out by that newspaper and others, by the doctors and the medical journals and health bulletins, what is apparently a certainly operating immunization against this disease is available without large out-

lay of money for luxuries. All that is required is a ration in which red meat, milk, and vegetables have their proper representation.

Pellagra has raged in the South, and it continues to, because of the prevalence of a diet that is almost exclusively composed of salt-cured pork, cornbread, and molasses. Even when the menu has been ampler than this, it has lacked, among millions of

people, the balance provided by red meat, milk, and fresh vegetables.

If it takes a century to learn and apply simple rules of diet, how long would it require the people of the South, or of the Nation for that matter, to learn and properly apply the economic rules necessary for the prevention of the economic disease of prolonged depression?—*Asheville Times*.

Swimming Pools

SEPTEMBER is not the month to be discussing swimming pools. We thoroughly understand that fact, but there is no better time to begin preparation for extending such facilities for another summer than right now at the close of one of the hottest and most disagreeable summers experienced in North Carolina in a long time.

Sometime ago a correspondent of the *Raleigh News and Observer* suggested that the State Board of Health should get in behind a movement to provide community swimming pools in all the villages and small towns for the citizens of the State not now benefited by such facilities. This writer took the view that it was a legitimate health measure which the State Board of Health should promote and support. We are inclined to agree with him. Naturally the concern of the State Board of Health in this field so far has been confined to sanitation of such places as already existed. The swimming pool, unless it is properly supervised, can be, and often is, a menace to the health of the community. Therefore the State Board of Health has been concerned with the regulations concerning the operation of public swimming places.

It is undoubtedly a public necessity that swimming facilities should be available to all children and young folks in any community without too much expense and danger to health being involved. We will take

Raleigh as an example because we know more about it than any other place in the State. A conservative estimate would be that provision is ample in the city or in the country surrounding the city within a reasonable distance for the accommodation of about one-tenth of the population. The children of the middle class and the poorer people of the city do not have a chance. There are two public swimming pools in the city which would accommodate conveniently about one hundred people at a time. These places are expensive and cannot be used every day by people in moderate circumstances. The State College has a pool for its faculty families, the Y. M. C. A. has a pool for its membership, the socially elect who happen to be members of the Country Club have a nice pond for their members, and a number of Raleigh citizens have pools either on their premises or estates in the country outside the city. All of these are restricted to the friends or members of such aggregations, but the great mass of the people have no opportunity whatever.

Nothing could be more beneficial to the children from babies up through adolescence than to have the benefit of good swimming facilities every day throughout the summer season. We hope those who are interested and have the means to promote such enterprises will devote some effort along this line before the beginning of another spring.

Headache Powders Cause of Death

THE State Board of Health seems to be receiving more complaints than ever before concerning the untoward effect, to say the least, of numerous preparations now being exploited as "headache cures" and so on. It is rare that the writer listens in on his radio without having to endure the punishment of a lot of "sweet talk" extolling the virtues of this, that, or the other headache remedy. It is rare that he gets into his automobile and starts home from work but that some automobile dashes by with an advertisement for Z Y or G W, sure-shot cures for headaches, covering the spare tire.

Letters come to the office in increasing frequency inquiring about so and so's powder or such and such a tablet as cures for headache. They want to know if it is "dope," if it is "harmful," if it does what the promoters say it will do, and so on. Only a few weeks ago a death certificate came in from a county stating that the deceased, although apparently in good health, frequently suffered from headache, and on this occasion took seven X Y powders in the course of six hours and promptly died. The doctor who filled out the certificate stated that there ought to be a warning put on each label about the depressing effects and dangers of such drugs. He probably had not heard of the Tugwell Bill, which had just been so gleefully killed in the United States Congress by a combination of cold-blooded proprietary interests with many of the newspapers of the country. That law, or a similar law, would make it impossible, if enforced, to sell such drugs promiscuously to the people without a warning of the dangers involved.

Sometime this year we received a letter from a distinguished physician who is medical director of a great life insurance company. The letter constitutes such a valuable warning to those people who take the word of the advertisers of these various remedies as truth that we procured the consent of the writer to publish it, with the names and locations, of course, deleted. We hope our readers will not object to our pardonable pride in the fact that such a distinguished physician is in the habit of reading the editorials in THE HEALTH BULLETIN. The letter follows:

"I was reading yesterday in THE HEALTH BULLETIN your warning in regard to so many people taking headache remedies.

"There is now on my desk a death claim for \$1,500 on account of the death of a man 39 years old, a farmer, who had had no sickness since the childhood diseases, first-class family history, and healthy in every way as far as examination could demonstrate. He came from the field from his usual work complaining of toothache. At bedtime he took some aspirin, no relief, then one ——— powder, thirty minutes later another ——— powder; three hours later wife was awakened by his hard breathing and he died in a few minutes. His family physician made a post-mortem, and his report is the following:

"He showed no evidence of acute chemical poisoning or any signs of chronic heart failure. When I arrived he was deeply cyanosed, and my conclusions were that he had died from acute myocardial failure from depression of the heart by acetanilid in the ——— powder he had taken. He worked hard each day and appeared to be in good health as I saw him from day to day.'"

We desire to add that the basis for each and every one of these powders, liquids, tablets, or what-nots, advertised to be sure "cures" for headache and pain of every description, is to be found in a "coal tar" preparation, generally acetanilid or antipyrin. That is the cheapest and most powerful form in which such products may be obtained.

MR. JNO. G. BEARD,
CHAPEL HILL, N. C.



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A STORY IN FEW WORDS

**The Reported Number of Infant Deaths Under One Year
of Age Occurring in the First Seven Months of This
Year Compared With the Same Period Last Year**

	1934	1933
January.....	473	441
February.....	528	432
March.....	610	465
April.....	487	387
May.....	465	419
June.....	596	548
July.....	534	400
Total.....	3,693	3,092

Three thousand six hundred and ninety-three homes already made desolate this year. One of the causes: Three or four generations of undeserved poverty with its resultant ignorance and misery. And yet the State of North Carolina contributes more per capita in cash revenue to the Federal Government than any other state in the Union. Nearly twice as much as the great State of New York, almost four times as much as Massachusetts, three times as much as Illinois, much more than three times as much as California, and more than four times as much as Michigan. Four times as much as Pennsylvania and more than four and one-half times as much as Ohio. Every one of those states draws tribute through commerce from all the earth. Every one of them has personal and corporate wealth which far overshadows our cigarette and textile industries. But we pay for the fiddling, and we are paying it with our children's blood.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Scarlet Fever
Cancer	Health Education	Smallpox
Constipation	Hookworm Disease	Teeth
Chickenpox	Infantile Paralysis	Tuberculosis
Diabetes	Influenza	Tuberculosis Placards
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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine monthly letters)	5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months;
Minimum Standards of Prenatal Care	19 months to 2 years.
Breast Feeding	Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Infant Care. The Prevention of Infantile Diarrhea.	Instructions for North Carolina Midwives.
Table of Heights and Weights	

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Notes and Comment

ACCORDING to *Science News Letter* there is an average of about one hundred deaths from rabies in the United States every year. Last year four such deaths occurred in North Carolina, and the year before there were three deaths from this cause. So far this year no deaths have been reported to the State Board of Health, although there have been a large number of persons bitten by rabid dogs. All of them have been given the Pasteur treatment promptly, and so far no cases of rabies have developed. Agitation in this matter is necessary until there is not a stray dog left in North Carolina.

* * *

FOR the purpose of keeping the record straight, to say nothing of joining in the chorus, it may be stated here again that deaths from automobile accidents in North Carolina continue to increase. Even now there are very few families in the State who have not felt the calamity of a death of some of the family connections from this cause during the last few years. At the present rate of increase no family can expect to remain immune. This is not the place to go into a discourse on the subject. The editors of all the papers in the State are surely keeping the question agitated.

It is here and now set down in these columns that fully 99 per cent of deaths from automobile accidents are preventable. The way to prevent them is to make punishment of the drunken, careless, and reckless driver so swift and so severe that that particular

driver and his friends will never have any inclination to violate the law in this respect again. Prevention in this field is not a responsibility of the health departments and the medical profession, but it is definitely a responsibility of the courts and the legal profession.

* * *

AS these lines are written, tabulations of the reports of infant deaths occurring in the State this year have been completed for the first seven months of the year. In sorrow and disappointment we have to record that there has been an increase in the number of deaths reported of babies under one year of age for every month in the year. The increase in deaths will average about 20 per cent over last year.

Despite the information disseminated through the newspapers, the schools, and by the health departments and the physicians, preventable deaths of infants have increased more rapidly this year than at any time in ten years. Should the present rate of increase in infant deaths continue for a few more years there will be nobody left in the State in another generation to pay the bondholders and to drive over our good roads.

Competent observers agree that poverty and ignorance, the latter so frequently a result of the former, is the chief cause of preventable infant deaths. Solomon said it a long time ago: "There is that scattereth, and yet increaseth; and there is that withholdeth more than is meet, but it tendeth to poverty."

THE State Board of Health has to spend considerable money and has to do a lot of hard work every year to get a prompt and accurate report of the birth of every baby occurring in the State. Miss Flora Ray, one of the State nurses who has been an employee of the Child Health Department of the State Board of Health for many years, made a statement the other day which has tremendous appeal. Miss Ray said:

"If every one could be made to understand that a birth certificate constitutes citizenship papers of every American citizen, then no trouble should be experienced in securing the registration of every birth which occurs in a county, whether white or colored."

The nurse is everlastingly right. In these days of rapid travel throughout the world, of easy transportation, of hitch-hiking, travel by airplanes, travel with or without money, and when everybody seems to be going somewhere all the time, it is becoming more necessary for governments in every country to take more accurate account of their citizens. All of us are familiar with the famous old story of "The Man Without a Country." Today a man or a woman without a country is in a serious predicament.

The time may come when the only acceptable evidence one may have of being a citizen of the United States would be a copy of the birth certificate. Unless the birth is reported promptly and properly recorded, it might be impossible to obtain a certificate. The parents of any baby born in North Carolina should not rest until a certificate, properly made out and every question plainly and fully answered, is filed with the local vital statistics registrar and later recorded in the permanent files of the State Board of Health at Raleigh. This is a matter the importance of which will increase as the years go on.

Have you got, or could you get, your citizenship papers if you wanted them now?

A Safe Age for Babies

By M. B. CHEATHAM

1. It will never be a safe age for any baby unless he has a sound mind in a sound body, the result of a normal healthy heredity and a wholesome environment.

2. It will never be a safe age for babies until all mothers have adequate prenatal and postnatal care, including competent medical attention.

3. There will never be a safe age for babies in North Carolina as long as an apathetic public sits idly by and lets our State have one of the most disgracefully high maternal and infant death rates of any civilized State.

4. It will never be a safe age for a baby as long as his community is apathetic towards general public health, and allows its water supply to come from polluted sources, and in turn pollutes the water supplies of other communities, as long as it permits uncontrolled breeding places of flies and mosquitoes, and as long as it allows filth, ignorance, and unsanitary conditions to flourish in its midst.

5. It will never be a safe age for children while we allow drunken drivers on our streets and highways to kill and go free to kill again.

6. It will never be a safe age for any child until he is immunized against diphtheria, typhoid fever, and smallpox.

7. It will never be a safe age for a child until he receives the benefit of regular, thorough physical and dental examinations, with necessary remedial work.

8. It will never be a safe age for a baby unless he has an adequate and pure milk supply, as well as an adequate supply of other necessary foods. (Our CWS nurses, as I recall, found approximately 20,000 undernourished children in the 115,000 examined.)

9. It will never be a safe age for a baby until his parents learn and practice at least the fundamental principles of infant care and feeding and general health.

The Value of School Health Examinations

By N. THOMAS ENNETT, M.D., *Surry County Health Officer, Mount Airy, N. C.*

RECENTLY the public schools of this State have called thousands upon thousands of children to the classroom. From Murphy to Manteo have they come. Some from the hovel and some from the palace, but whether from hovel or from palace, they all come as wards of the State. Not only do they come as wards of the State, but between the ages of 7 and 14 years they are, by the State compulsory attendance law, *compelled* to come.

Thousands have come physically fit and will be equal to the strain of the modern, standardized school program, but other thousands have come physically unfit and will be unequal to the strain of this standardized school program. The fit will, in the language of the street, make the grade; the unfit fall by the wayside. Every day will see the *drama* of the fit enacted and every day will see the *tragedy* of the unfit enacted.

If you were to ask me what the school child needs most, I would not say an education. I would say his first need is a sound body. A sound body not as an end in itself, but as a means to an end; as a means to a sound mind; as a means to material success; as a means to the full development and enjoyment of the finer things in life.

The ancients knew the value of a sound body. Socrates, the Greek philosopher, four hundred years before Christ, said: "I would have you know that neither in any struggle nor in any kind of practical life will you get on worse because you have brought your body into a good condition." And a little later, Juvenal, the Roman poet, pleaded with his countrymen for a "sound mind in a sound body." So the fact that mental progress and physical health are closely related is no new idea and the idea is not strange, but the strange thing is that we continue to spend billions of

money on beautiful school buildings and on teaching service in an effort to create or develop a sound mind and, practically, ignore the matter of a sound body. But our conception as to the value of health is beginning to change. Through the teachings of the up-to-date private physician, and especially through the literature and clinics of the State Boards of Health, the public is becoming health conscious. Even the educator, who only a few years back said that the first duty of the school was to teach the three Rs, is now declaring, with equal conviction, that *health* is the *first* object of education. And the hopeful part of this is that his attitude but reflects the present-day sentiment among all well-informed persons. However, this sentiment has not yet crystallized to the point where State appropriations are sufficient for adequate medical work in the schools, nor has the average school principal been willing to practice what he preaches, by allotting on his daily program sufficient time to health and hygiene instruction to really make health the "first object of education."

At last we are learning that the health of the child determines the health of the adult; that the sickly child becomes the sickly adult. But we did not always reason thus. If not at present, certainly in the recent past, it was not uncommon to hear neighbors, when discussing defects or disease in their children, dismiss the matter lightly, with the remark, "Oh, well, I guess he'll outgrow it."

If he had diseased tansils, he'd outgrow it; if he had a chronic cough, he'd outgrow it; if pale and bloated, he'd outgrow it; if suffering from malnutrition, he'd outgrow it; if troubled with earache and running ears, he'd outgrow it; if suffering with headaches and blurred vision, a result of eye-strain, he'd outgrow it; if suffering with pains in his legs and joints,

so-called "growing pains," he'd outgrow it. In fact, it was so much easier to say "he'd outgrow it" than it was to do something about it, that even the physician himself may not have been guiltless in this respect.

The parent failed to understand that while the child was outgrowing diseased tonsils his heart was being damaged beyond repair; that while outgrowing a chronic cough he'd be growing into consumption; that while outgrowing a pale and bloated look hookworm would be gnawing at his vitals, retarding, markedly, both physical and mental growth; that while outgrowing malnutrition, his body would be fertile soil for the germ of tuberculosis; that while outgrowing earache and running ears, he'd gradually grow into permanent deafness; that while outgrowing headaches and blurred vision, his sight would be seriously and permanently impaired; that while outgrowing so-called "growing pains," which is really a rheumatic infection, he would develop rheumatic heart disease, crippling his heart for life. Space will not permit me to catalogue all of the diseases and defects the child is supposed to outgrow, but these illustrations will suffice. The picture has not been overdrawn. Indeed it is conservative, for I do not wish to alarm, but to arouse.

The question then arises, Can these childhood tragedies be prevented, and, if so, how and by whom? Frankly, not all can be prevented, but many of them can be prevented.

The best means of preventing these tragedies is to place your child, especially during infancy and up to school age, under the close supervision of your physician. (When this is done pre-school clinics will be unnecessary.) It is a sad fact, but many mothers will consult the doctor often during baby's first year, but after that this little human plant is no longer under the watchful eye of the physician; and the weeds of defects and disease begin, insidiously, to check and choke its growth, and before mother realizes what is taking place serious and perhaps permanent damage has been done. We who have done medi-

cal inspection of schools know that the pronounced defects which handicap many children in their school work had their onset long before the child entered school. After the family physician, the next best means of preventing these school-child tragedies, and they are tragedies, is universal periodic school medical examinations. And, of course, it is understood that this means dental as well as medical examination, for no health examination is complete which does not include a dental examination. If it is true anywhere in the realm of human experience that an ounce of prevention is worth a pound of cure, it is doubly true as regards our efforts to conserve the health of the child. For as the twig is bent, so the tree's inclined.

As to whose business it is to prevent these childhood tragedies I believe it is to be the joint responsibility of the home, the family physician, the health officer, and the school. These agencies are mentioned in the order of their responsibility, unless we place the family physician first and the home second.

So important is the school health examination to the child's health and school progress that no superintendent, no principal, no teacher, and no parent in this Commonwealth should be satisfied till every child in North Carolina, from the mountains to the sea, has the benefit of a periodic school medical examination. Of course it will cost the State money, but it will yield dividends beyond computation. And I do not mean dividends in health only, but concomitantly, dividends in dollars and cents as well. Think of the multitude of repeaters and repeated repeaters who are repeating on account of some physical defect; for example, deafness or poor vision. I mention these especially because hearing and sight are our chief senses in learning. It is estimated that 20 per cent of the 24,000,000 school children in the United States are retarded in their studies, and that one-third of the retardations, or nearly 2,000,000, are due to defective vision. It is also estimated that this neglect of the eyesight

of school children costs the public school system \$130,000,000 annually. Based on population, this means that the retardations in our schools from defective vision alone is costing North Carolina an immense sum annually. I have no figures on the cost of retardations due to deafness, but we all know that impaired hearing in the school child is not uncommon—in fact, about 3 per cent have defective hearing—and that deafness is a serious handicap in school progress.

It was a fine thing for North Carolina to guarantee an eight-months school to every child. It would be finer if it would go farther and, through medical and dental examinations to all school children, with free corrections to the indigent, guarantee, as far as possible, not only an eight-months school, but eight months school progress. At present it is an eight-months school with less than seven months progress. And it can be done without the cry of State medicine. The medical profession of North Carolina have ever been public-

spirited and ready to serve its people, and today, as in the past, are, without fanfare, daily giving, without reward or hope of reward, their services to the needy. They know the value of medical examinations in school children; they look upon it as preventive medicine, and therefore a proper function of the State; but they very properly feel that the State should not practice curative medicine for those who are able to employ a private physician.

The school medical examination is a check-up on your child's health. From it you learn whether or not he is growing and developing as nature intended that he should. If he is not so developing you should know it, and know its cause, that the handicap, whatever its nature, may be removed; for obviously the examination alone, however well done, is valueless unless the defect or disease present is corrected. Health is Life's greatest asset, and the purpose of the school medical examination is to give health to the school child, and give it to him more abundantly.

Report From New Hanover County

ONE of the most attractive as well as exhaustive and comprehensive local health department reports seen here is the 1933 report of the Wilmington and New Hanover County Consolidated Board of Health. This report was prepared by Dr. A. H. Elliott, county health officer, to whom we are indebted for a copy. The report is in the form of a booklet, and covers many pages as well as charts and tables of various kinds. Any citizen of New Hanover County desiring information about his health department can receive it by reading this report.

The report is in the form of a pamphlet and is issued once a year in this form. This feature was adopted many years ago, we believe, under the direction of Dr. John H. Hamilton, while health officer of New Hanover.

The pamphlet has a standing sub-head, to wit, "From the North East River to Federal Point, and from the Cape Fear to the Sea—City, Suburb, Village, and Farm—we are one people, striving for healthful and useful living."

For the information of citizens living elsewhere in the State, and particularly for physicians, nurses, teachers, and all individuals engaged in public or semi-public health work, we quote a few items from Doctor Elliot's report, as follows:

Infant mortality continues to be one of our most serious problems. One of the tables will show that over 50 per cent of these infants die before they are a week old. This table also shows that prematurity causes most of the deaths. This indicates that prenatal care and the hygiene of pregnancy is sadly neglected in many women. This is a difficult problem in certain classes

of women because of ignorance and lack of coöperation. It is very difficult to get some women to report for obstetrical care until they are nearly at term. This is a great handicap in prenatal work. The midwives have been kept under increasingly strict regulations and supervision. Several have had their licenses revoked because of old age or ill health. Out of 898 live births and stillbirths, 159 were attended by midwives. The fault rests much more with the mothers (lack of coöperation and failure to report to physicians or clinics early) than with the midwives. Constant effort is made to educate mothers to the importance of prenatal care. The great majority of stillbirths and premature births occur in our hospitals, which is naturally to be expected of abnormal cases. Care given mothers during delivery is shown in another table. All prospective mothers reporting to our dispensary are put on the mailing list of the Maternity and Infancy Division of the State Board of Health and on the prenatal list of the nurse in whose district they live. Dr. R. B. Rodman, Assistant Health Officer, has prepared a brief sheet of general directions as to diet elimination, keeping in touch with a physician, etc., which is given to each obstetrical case reporting at our clinic. If each physician would get out a brief booklet or leaflet on

prenatal care and present it to every obstetrical case on her first visit, it would not only help each such individual, but would have a far-reaching educational influence by forewarning many prospective mothers who would read such booklet.

"An additional table gives a record of our maternal deaths for the past twenty years. It is very discouraging to note that very little improvement has taken place in maternal mortality during that length of time. Separated by color, the white rate shows a slight improvement, while the rate for colored women shows a very definite trend upward. As commented elsewhere in this report, there is a great need for getting obstetrical cases to report to physicians or clinics early enough to have the benefit of proper prenatal care. It is claimed that roughly two-thirds of maternal deaths are due either to the lack of prenatal care or care during delivery. Practically all such deaths could and should be prevented. Coöperation on the part of expectant mothers is an absolute essential in prenatal care.

"Our rather high number of septic infection cases would seem to convince the medical profession that the conduct of labor should be treated as a major operation and all the advantages of antiseptics and asepsis be given these patients, whether delivered in the hospital or in the home."

Appearance and Health As Related to the Mouth

By MARY BATCHELOR

IT is probably too drastic to say that beauty is the most priceless of all possessions, but it most certainly is among them, and it demands for itself many things that are way beyond reach without it. There was only one Helen of Troy and only one Cleopatra, but it would be a far pleasanter world if everyone turned to it the best face possible.

Of course, beauty is in the eye of the beholder, and you cannot expect a person with a preference for brown eyes to find blue, hazel, gray, or black ones equally as lovely. Nevertheless, mouths filled with strong, white teeth

admit no difference of opinion—they are beautiful—and a little care, a little foresight, will keep them so. The rules are so simple that anyone can follow them. There are no mysterious beauty rites necessary for lovely teeth; just these three simple rules:

BUILD THEM WELL
KEEP THEM WELL
KEEP THEM CLEAN

When we speak of building them well, we mean giving them the proper foods they need to make them strong. Teeth, like bones, are built of lime (or calcium) and phosphorus, and

these elements are contained in so many of our everyday foods that with only a little thought, and no trick diets, we may be sure our teeth and our bones are being taken care of.

To keep the teeth well we need the same food elements, and we also must have foods that require hard chewing, which will give exercise to the teeth, the supporting tissues, and the jaws. Raw vegetables, fruits, hard whole-grain bread, cereals, etc., will give the exercise which is essential.

The hard, coarse foods are of great help, too, in the third rule, that of keeping the teeth clean, and they are equal in importance with the tooth-brush, which is the principal agent for cleaning the teeth.

Neglected teeth and abscessed teeth are the camping grounds for all sorts of germs which are breeders of that condition known as "pyorrhea." In this disease, the bone supporting the teeth, the membrane which fastens the teeth to the bone, and the gums, are gradually destroyed, so that the teeth become loosened and are eventually lost.

Ugly projection of the jaws, which is sometimes seen, is unnecessary. It may be caused by pacifiers, teething rings, thumb-sucking, mouth-breathing, premature loss of baby teeth, or the loss of the six-year molar, which is the first permanent tooth and the key-stone of the arch. All of these things, by changing the pressure of the muscles on the jaws, may cause the bones to develop abnormally, causing a misshapen face, which is as unnecessary as it is unlovely. The human animal neither crops grass from the ground like a horse nor leaves from tall trees like a giraffe, nor does he use his teeth as weapons like the bear and the wolf, nor for building his house as the beaver does. Yet all too frequently we see unfortunate people whose mouths, by their appearance, would do very well for a beaver or a wolf. Of course, there must be differences in human mouths, but the arch should have the appearance of a "horseshoe," and any great variation from this ordinarily means that the teeth will be

irregular. The sooner this is determined the more easily it may be corrected.

Everyone is entitled to straight teeth, normal jaws, and a good-featured face. There is little that can be done for a nose that is not an object of beauty, but by observing the simple rules everyone should have straight, beautiful teeth.

Nor is the question of facial beauty the only one to be considered. There is always the question of bodily health as related to the teeth. So many disabilities may be traced to broken-down, decaying teeth and diseased gums. Teeth which harbor germs may be associated with diseases in various parts of the body and may affect the health of the child. No child can chew his food properly when his teeth are hurting him. He either loses his appetite completely or he bolts his food, both of which are harmful. In addition, there are the poisons which drain into his system from decayed and abscessed teeth.

Diseased teeth and gums may contribute infection to the nose, the eye, the sinuses, the stomach, and intestinal tract. They may also be the source of the germs which invade the heart or kidneys, often causing serious conditions. Arthritis, a crippling and painful condition, may follow infection in and about the teeth. So also may neuritis, another painful condition.

In the prevention or treatment of disease anywhere in the body the care of the mouth and teeth is of first importance. There is no point in trying to disassociate one part of the body from the rest of the body. Every structure in this mechanism is connected in some way with all the others. The health of one part helps to keep the entire body in condition. A disease in one organ may menace the whole structure.

At this season of the year many mothers are preparing their children for entering school. They are buying new shoes and new clothes so that their children will be kept warm and dry; so that they will present a good

appearance; so that they will be happy. They are buying new books so that their children may learn their new lessons. But many of them are forgetting the important part that mouth health plays in their children's lives and happiness. Many of them fail to realize that a dirty, diseased mouth will not only ruin the good appearance it is hoped the new clothes will create, but that diseased teeth and gums will play more havoc with the health of their children than will all their wet feet. And they often fail to see that new books for new lessons are useless when the pain of an aching tooth drives away all ability to concentrate.

The problem of repeaters in our schools has come to be a serious one. If in preparing a child for school his physical condition were checked as carefully as his wardrobe, the problem of such repeaters would be less great. With the crowded condition of our schools, added to the problem of repeaters, the teachers of the State are going to find their hands full in teaching the child simple reading, writing, and arithmetic. They will do all that they are able to do in teaching the child the proper health habits, but the mother has a definite responsibility in this field. It is, after all, her business to see that her child has the proper substantial food with which to nourish and maintain his body during the growing years. And it is her job to see that her child's mouth is kept clean and in good condition. It is up to her to see that her child is sent to school in as perfect physical condition as possible.

After following the three simple rules for good teeth—building them well, keeping them well, and keeping them clean—if it is found that there are irregularities, cavities, and gum boils in the child's mouth, it is necessary that he be taken to a dentist immediately so that these conditions may be corrected at once.

It is our hope that in the not distant future every mother will give earnest consideration to the physical equipment of her child when she is pre-

paring him for entrance into school.

In conclusion, it may be reiterated that everyone is entitled to straight teeth, normal jaws, and a good-featured face, along with the bodily health which goes with them, and the sense of normal well-being which they give.

Every Pregnant Woman Should Have a Wassermann Test

A woman, age forty-three, was referred to the local syphilis clinic following a positive Wassermann test made while she was in the hospital following a miscarriage. She had had thirteen pregnancies, eight of which terminated in miscarriages. The five children were brought to the clinic for examination, and the two oldest were found to have syphilis. These two children and the mother were placed under treatment.

This is a signal example of the importance of making a blood test on every pregnant woman. Had this mother received adequate prenatal care, including Wassermann examination, during her first pregnancy, it would doubtless have saved much expense and suffering and insured healthy children.—*New York Health News*.



Here is a picture of the small daughters of Mr. and Mrs. O. S. Brooks, of Hot Springs, North Carolina. Mrs. Brooks writes that the children are being raised by "The Book." Their home is near where the German internment camp was located during the World War.

A Practical Health Program Invaluable

THE *Skyland Post*, owned and edited by Miss Nancy Ruth Reeves, of West Jefferson, has a good editorial in a recent issue under the above head. We quote it in part:

"Each year when a State nurse is stationed in the county to visit homes and examine school children according to health standards, we have cause to be appalled with the figures which call our attention to the fact that such a big number of the children have teeth uncared for, decaying tonsils, weak eyes, etc.

"This year the nurse here tells us that hundreds of children are born each year without the benefit of a doctor or a competent midwife, and that many homes are left without a wife and mother because of this thing which could be avoided and which is purely a case of death from neglect."

The editor of *The Post* goes on in the editorial to describe the work of the Frontier Nursing Service, started in the remote mountains of Kentucky about ten years ago. The fact that 1,950 women in childbirth have been cared for in the Kentucky work without a single obstetrical death during that period is recorded. Only two mothers have died of chronic heart disease, but none from causes which make our maternal mortality in this State—and infant mortality also—a reproach to our people. The editorial properly states that the record of these nurse-midwives in Kentucky is the envy of experts in civilized centers throughout the world.

That is true. Our own nurse was accurate in stating to the editor of the *Skyland Post* that a large number of babies are born in North Carolina every year in which the mother and the family do not have the assistance of even a competent midwife. More than a third of them do not have the services of a physician at all. The thing that must be done for these hundreds and hundreds of women, if we would maintain our self-respect as a civilized people in North Carolina, is

to provide a dependable class of midwife service until arrangements can be worked out to provide every one of these women with the services of a competent physician.

The State Board of Health has received much encouragement during the last few years in its efforts to exclude the practice of grossly incompetent midwives and to improve the service of the remainder, who, under the present system, continue as a necessity. We have been discouraged and criticised by a very few physicians on the ground that we are publicising and glorifying and advertising midwifery, when all we should do would be to be recommending the services of physicians.

It is the ideal and objective of the State Board of Health to work toward the time when a competent physician's service will be available to any sick person in North Carolina, and especially when such service will be within the reach of every woman in childbirth. The officials of the State Board of Health have looked upon the necessity for midwives in the present organization and financial condition of our people as a necessity. We have, therefore, worked all the time during the last few years to improve this service up to the point at least where it will not be a menace on account of dirty and ignorant midwives.

In one of our own mountain counties not long ago, Miss Cora Beam, one of our nurses of long experience in this work, described a meeting which she held in one of the remote communities of the mountains. Miss Beam said:

"One old woman midwife attended the meeting Friday. She walked the six miles from a place where no car can get to, and in a downpour of rain. She is seventy-one years of age. When she got to the meeting place she was as wet as could be. I thought sure she would be sick, but the next day she said she felt as well as she ever was. Said she was used to going in the rain

in all kinds of weather. As she seemed well I suppose the soaking did not hurt her.

"There was a midwife here yesterday with a baby. She said she wrote you for literature, and she gives credit to the State Board of Health literature in raising her own baby. The baby is about as near perfect as I have ever seen. Her home is in a remote section, a place hard to get to, especially in wet, bad weather. But she followed the directions outlined in the 'baby books' of the Board of

Health; and the baby certainly shows the results."

All of the people of the State by this time ought to understand that the State Board of Health is endeavoring in every way it can to bring about available medical service for every woman, but until that time it is doing its best to make life easier for the poor people of this State who have to depend upon the services of such individuals as the midwives.

Danger of Anti-Fat Drugs

"IF you are overweight, or for any reason find it desirable to get rid of a few excess pounds, don't prescribe for yourself. Above all, don't take anti-fat drugs, no matter how extensively they may be exploited. Go to your doctor and follow his instructions. He will direct you as to what is needed for your own particular case."

Along with this advice which comes from Dr. R. H. Riley, Director of the Maryland State Department of Health, Doctor Riley warns specifically against the use of alpha dinitrophenol, which has recently been placed on the market, under various names, for medicinal uses and extensively advertised for its "reducing" properties.

"Alpha dinitrophenol," Doctor Riley said, "is a chemical compound that has been used for some time in the manufacture of explosives. More recently it has been used as a medicine to speed up the cellular activity of the human body. In this connection it has been widely advertised as a 'reducing' agent.

"It is an extremely dangerous and treacherous compound and should be avoided unless it is prescribed by a physician who is thoroughly familiar with the constitution and characteristics of the individual to whom it is given. Numerous workers in munition plants are reported to have suffered ill effects from exposure to it in connection with their work, and articles published during the last year in the

Journal of the American Medical Association have shown how serious its effects may be when used as a medicine.

"Some people are particularly sensitive to certain drugs, and that is true of alpha dinitrophenol, as of other drugs. It has been shown to be especially dangerous to persons suffering from heart disease, diseases of the liver or kidneys, chronic rheumatism, tuberculosis, and alcoholism, as well as to persons suffering in other ways.

"The danger from the administration of alpha dinitrophenol and related compounds is so great that the Federal Food and Drug Administration has warned the public against their use. State Departments of Health are beginning to take up the matter, also. In Louisiana, for instance, the same restrictions are applied to the use of this chemical as to poisons generally, and its sale, as a medicine, is not permitted except upon the written prescription of a physician.

"The advice of the Maryland State Department of Health in regard to all of these anti-fat remedies is: 'Don't touch them. Your doctor knows your constitution—your weak and your strong points. Go to him. If you need to reduce, he will tell you what to do and how to do it.'"—*Maryland Health Bulletin*.

Teacher—Class, make two sentences using the words *each* and *laden*.

Johnny—I ain't ever had the *each*.
The hen *laden* egg.

Raleigh Vital Statistics—Old and New

DR. A. C. BULLA, health officer of Raleigh, has tabulated some very interesting statistics, comparing the death rate from such diseases as typhoid fever occurring in the city of Raleigh since 1887. Some of these comparisons are timely and of very great interest at the present time.

Doctor Bulla says that the Bureau of Vital Statistics for the City of Raleigh was established in 1887, and since that time the records of deaths compiled in the city have been as complete as could be expected, beginning so early in the period of aroused interest in this country about statistical information of that character.

Some of Doctor Bulla's interesting compilation follows:

In the year 1887 Raleigh had a population of 11,652 people. In that year 8 persons died from typhoid fever. For the next three years the number increased each year, and in 1890 there were 18 deaths from the disease in Raleigh. The population had increased in these three years to 12,678 people. Therefore the death rate from typhoid fever in the city of Raleigh for 1890 was 142 per 100,000 population. In 1892, however, there were 23 deaths, which afforded the city a rate of 178.7 per 100,000 population. This was the highest death rate recorded in any year of the period.

Assuming that there were 10 cases for each death occurring, which is probably a little too high, this would mean that in the year 1892 there were 230 cases of typhoid fever in Raleigh, with 12,870 people. If such a rate had been in effect in 1933, when the city had a population of about 38,000 people, it would have meant that last year there would have occurred 69 deaths from typhoid fever, and there would have been 690 people seriously sick with the disease in the city of Raleigh.

This is a comparison that should cause sober thinking on the part of every citizen of Raleigh and of North Carolina, when it is understood that typhoid fever is still present and the possibility of an outbreak in epidemic proportions is always present when the necessary precautions fail to be observed.

As late as 1900 there were 13 deaths from typhoid, the rate being 110 per 100,000 population. For the next seven years, or until 1907, the number of deaths ranged anywhere from 6 to 11, with 20 occurring in 1907, giving a rate that year of 114 per 100,000 population. This was the second highest rate recorded in the history of the statistical department since 1887. The third high peak came in 1913, with 13 deaths, making a rate of 62.6 per 100,000 population. In 1918 there was not a death from typhoid reported in the city, and since that time there have not occurred in any one year more than 6 deaths. The number dropped to 1 in 1931, and rising to 4 in 1932, dropping back to 2 in 1933, which gave a rate of 5.3 per 100,000 population.

It will be noted that the rate in 1892 was about forty times as high as 1933. It will also be recalled by long-time residents of Raleigh that after the high peak of deaths from typhoid was reached in 1913, the health departments, State and local, moved into action, first demanding an adequate water system, properly safeguarded, for the city. Milk regulations were inaugurated and food inspection was placed on a sounder basis, and the great typhoid vaccination campaigns of 1915-16 were conducted. In short, the menace of typhoid fever between 1887 and 1913, a period of twenty-six years, was present in sufficient volume to endanger every citizen of the town.

It is hard for the young generation, reared since 1913, to realize the

great conquest of typhoid. It is, however, present today in sufficient volume to require every effort on the part of the health departments, city authorities, and the people to prevent a more widespread outbreak. Continual vigilance in exacting pure water, safe milk and other foods, and the protection of modern sanitary facilities of every type, will be necessary to protect the citizens in the future.

Typhoid fever was not the only disease, however, that played havoc in the early days, according to the records in the Bureau of Vital Statistics. In 1887, for example, 27 deaths from diphtheria were reported

in Raleigh. That was a rate of 231.7 per 100,000 population. The next highest rate to that, in recent years, was the rate of 20.1 per 100,000, which occurred in Raleigh in 1928 during an outbreak of diphtheria in that year. Only 1 death occurred in 1931, 2 in 1932, and 1 in 1933.

The figures for diphtheria afford a graphic picture of what the discovery of antitoxin, and in recent years the preventive material known as toxin-antitoxin, has meant in the control of this disease.

Let us hope that never again will the city be punished with any such high death rate from such easily preventable diseases.

Health Work In Robeson County

A SHORT time ago we had the privilege of a visit to one of the prenatal clinics conducted by Mrs. Margaret Sloan under the direction of Dr. E. R. Hardin, of the Robeson County Health Department. We have been endeavoring for a year or more to take a personal look-in on one of these assemblies.

Mrs. Sloan has been connected with the Robeson Health Department for about eight years. She is the widow of one of the grand old country doctors of eastern North Carolina. She is herself a trained obstetrician—that is, trained in the field of experience. Of course, she makes no claim to medical knowledge and poses as nothing more than a maternity and infancy nurse of the Robeson County Health Department. Her husband, Dr. Henry Sloan, enjoyed a large country practice and in his years of declining health Mrs. Sloan accompanied him to his obstetric cases and therefore obtained a special training in this kind of work that is seldom the privilege of any nurse.

Doctor Hardin, the county health officer, is a thoroughgoing official. He is hard-working, has fine medical training as a background, and has been the successful health officer of

Robeson County for nearly fifteen years. He is in thorough sympathy with this work, has organized it and assisted Mrs. Sloan in executing it in every way possible.

On seven working days every month Mrs. Sloan conducts one of these prenatal clinics for indigent women of the county. On the day we visited her she had in attendance about twenty women, nearly every one of them having some trouble which, if not discovered and remedied, would seriously jeopardize the safe delivery of a normal baby.

One of the routine procedures of the Robeson work is to have a Wassermann, which is made for every woman coming to the clinic. We were impressed with this procedure because we have long ago decided that such precaution is absolutely necessary and should be given to every expectant mother, and particularly to every primipara. Mrs. Sloan informed us that this procedure was carried out in every one of the clinics, as just stated, as one of the routine requirements. She informed us that Doctor Hardin stated sometime ago that the reports from these tests, which are, of course, made at the State Laboratory of Hygiene, indi-

cate more freedom from syphilitic infection than would be expected ordinarily from such a miscellaneous group of women. Most of the women attending were colored or Indian women.

A day or two after returning to the office from this visit we were impressed with a headline in the *New York State Board of Health Bulletin* for August 20 to the effect that "every pregnant woman should have a Wassermann test."

Nearly all of the women in the clinic on the day of our visit were referred to a practicing physician for further examination and treatment. It was necessary to obtain for most of them a written order from the relief department to compensate the physician to some extent for the ex-

amination and treatment which was to follow. This indicates a well systematized program that could and should be carried out in every county.

The work of Doctor Hardin and Mrs. Sloan in Robeson County has been outstanding. At the beginning of their service to regulate the work of midwives of the county, which literally numbered hundreds, there was a great deal of work without any supervision or restriction whatever. All of this has been terminated, and in no county of the State is midwife work under closer restrictions and supervision than in Robeson. Any baby looking for a place in which to be born with reasonable safety would find Robeson County today about 100 per cent safer than it was before Doctor Hardin and Mrs. Sloan commenced their exhaustive program.

Simple Exercises

WE have often in these columns complained at the tendency, especially among our educational friends, to overdo gymnastics and so-called physical education business. It has seemed to us that we have been alone in this feeling. Now, however, we find that another man has thought about the question so seriously that he has written a book on the subject. We take pleasure, therefore, in quoting an article in the *New York Times Book Review* of September 2 under the above heading, which needs no further comment from us.

EXERCISE WITHOUT EXERCISES.

By S. Arthur Devan. Illustrated by Ralph Wilkins. 84 pp. New York: Dodd, Mead & Co. \$1.25.

Mr. Devan throws his little bomb-shell straight at his readers from his very first page. "Formal exercises," he declares, "the 'daily dozen,' 'setting-up' exercises, gymnastic drills, and the rest, are for the most part useless and sometimes positively harmful. There is another way of building up bodily strength and vitality and shapeliness that is in some respects easier and yet a hundred times more effective."

It consists almost wholly in merely

standing, sitting, and walking in the right way, taking care to keep the posture always correct. If standing, sitting, and walking are correctly done for sixteen hours a day, he asserts, they are moderate exercises that give vigor, strength, and grace. Wrongly done, they constitute unnatural strain that is incessant for that same length of time. In successive chapters he takes up each of these uses of the body, and some other matters, explaining simply and at length just what should be done to correct wrong habits and how to hold and use the body for each purpose.

His suggestions and advice will be warmly welcomed by these many people who keep up their "daily dozen," or whatever, with more or less of doubt as to their efficacy. Mr. Devan is sincere and earnest in his exposition; his arguments show much keen observation and sound thought, and he sets forth his case convincingly.

Economy is not just not spending money, but it is more often wise spending of money. Higher death rate among infants, due to meagre appropriations for public health, is a high price for "economy."—*Raleigh Courier-Journal*.

Going To School the First Time

WE have written in these columns many times about the upset—in fact, the revolution—occurring in a home, especially when the first-born reaches the age of six and has to start to school. The same thing applies to every child, but it is more serious with the first-born. He has no older brothers and sisters to keep the eagle eye upon him, to comfort him in his anxiety, and to protect him from rough handling by his mates.

One of the finest things we have ever seen in print on this subject, however, appeared in the *Raleigh Times* in the syndicated column of O. O. McIntyre, a New York writer, a few weeks ago. Mr. McIntyre and his wife were on a visit to some suburban friends, and Mr. McIntyre became interested in their neighbor's six-year-old boy, just preparing to start to school.

Mr. McIntyre has kindly given us permission to quote from his article, and we hope that every mother and every teacher of primary grades will read it. We quote as follows:

"I was particularly interested in a neighbor's boy two doors down the street. He is just six. Interesting because shortly he is to take the first serious step into life. Going to school the first time. Only a mother knows the tremulous poignancy of that awful moment. Her precious baby goes out from her into the awful lottery of life. So tiny, naive, trusting, defenseless. So wholly hers. Nothing belongs so much to a woman as her child—at least for six years.

"Something of a child's close-knit dependency unskins when he sets off for school. His chubby legs are carrying him the first lap along an alarming road. More so these days than any time in history. Society by clapping a chit of a cap on his vacant little head and tucking school books under his arm suddenly claims him as a unit. Doubtless the gods of comedy and tragedy off yonder or up there are already regarding him a bit speculatively as they brew the rugged potions of experience he must drain to the bitter lees.

"And the anguished mother from the doorstep twisting the corner of her kitchen apron smiles through the mist! She feels a mite throaty to see him doing anything quite alone, his extreme babyishness accentuated by his absurd pretense at maturity. Watching his swaggering little back disappear around the first corner, she feels hurt to think that in a very few years he will be able to do without her. He has begun to stand alone.

"Thousands of these pink-cheeked shavers will soon begin their first tiny scratchings on the hard surface of life—scrawly pot-hooks, the A B C D and the 1 2 3 4 that turn so pleasantly into the joys of Ned in the First Reader. I fear we do not look upon these lads as reverently as we should. Their security means ours. Likely we shall need them just now more than ever as we seemingly roll into troubled years."

Deaths From Malaria In State For 10-Year Period, 1924-1933

Years	Deaths
1923	151
1924	123
1925	123
1926	85
1927	55
1928	66
1929	66
1930	46
1931	49
1932	56
1933	42

S. A. Holt, a Tennessee dairy farmer, recently lost one son and eleven cows from rabies. He belongs to a religious cult that is opposed to medical treatment. He would not permit a doctor to attend his boy. But before you consign him to perdition for his neglect, ask yourself, if you are a parent, whether you have had your children vaccinated against smallpox, diphtheria, and other preventable diseases.—*Upton G. Wilson in Reidsville Review.*



The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD OF HEALTH

This Bulletin will be sent free to any citizen of the State upon request!

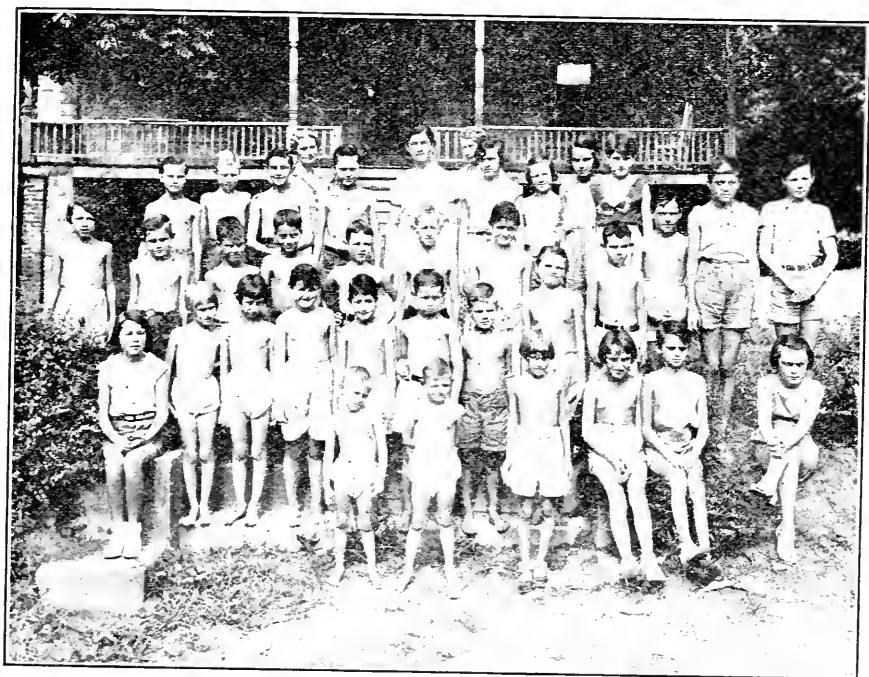
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GASTON COUNTY NUTRITIONAL CAMP



For seven weeks last summer this group of Gaston County children received medical, nursing, and nutritional care in what Stewart Atkins calls a "Nutritional Camp." The children entered the camp victims of chronic irregularity in habits and undernourishment. They emerged strong and in much better health.

Similar activities were carried on in a number of other counties this year.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Scarlet Fever
Cancer	Health Education	Smallpox
Constipation	Hookworm Disease	Teeth
Chickenpox	Infantile Paralysis	Tuberculosis
Diabetes	Influenza	Tuberculosis Placards
Diphtheria	Malaria	Typhoid Fever
Don't Spit Placards	Measles	Typhoid Placards
Eyes	Pellagra	Veneral Diseases
Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough
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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine	5 to 6 months; 7, 8, and 9 months; 10,
monthly letters)	11, and 12 months; 1 year to 19 months;
Minimum Standards of Prenatal Care	19 months to 2 years.
Breast Feeding	Diet List: 9 to 12 months; 12 to 15
Infant Care. The Prevention of	months; 15 to 24 months; 2 to 3
Infantile Diarrhea.	years; 3 to 6 years.
Table of Heights and Weights	Instructions for North Carolina Midwives.

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Notes and Comment

FOLLOWING our annual custom of many years, we are again presenting in this issue the complete report on tuberculosis mortality by counties for 1933. We have assembled some interesting material about tuberculosis and nutritional conditions. On the whole, we hope and believe our readers will find this issue interesting and helpful.

* * *

AGAIN we come to the month in which the great American festival of Thanksgiving is annually observed. This year the people of North Carolina have a great deal to be thankful for in a material sense. The prices for farm products are better than for years past. People have had several years of intensive hardship to endure, but this year those who have worked on the farms are realizing at least something for their year's hard labor. Although the recent textile strike caused a great deal of trouble and hardship for many people, it seems to have been adjusted with a minimum of danger and friction and with a maximum of satisfaction to both parties—and for the general public.

This year there have been greater efforts than heretofore in providing underprivileged children with an opportunity for improved health. Our front cover carries a picture of a group of children cared for in Gaston County. This is simply to illustrate what has been done in a great many counties of the State this year. Every one of those families has reason to be thankful. Most of the State employes

have had a hard year on account of the drastically reduced salaries and on account of increasing cost of living. At the same time most of them are thankful that they have had jobs of any kind, and the morale of the State Department of Health employes has kept up remarkably well.

In the field of disease prevention, which is the especial function of the State Board of Health, the people have cause for thanksgiving, in that typhoid fever and a few other diseases have been less prevalent this year than probably any year in the State's history. On the other hand, a larger number of infants under one year of age have died this year than in any year in the recent past. This is cause for much grief. Instead of lying down supinely and becoming resigned to this situation, it should stir us to try and arouse every citizen of the State to increased activities to prevent such an occurrence any year in the future.

Aside from the morbidity and mortality among infants, on the whole the people of the State have more reason for thanksgiving this year than for several years past.

* * *

REPORTS come along every day describing the occurrence of rabies in different sections of the country. The Westchester (New York) Health Department reports a recent death of a child from rabies in New York City. The headline describing this death was entitled "A Martyr to Bad Citizenship." The headline is a good one. That is exactly what it is.

There are individuals in North Carolina, as well as other states, who still claim that there is no such disease as rabies, in spite of the fact that it causes the deaths of about one hundred people in the United States every year, according to *Science News Letter*. The bad citizenship part comes in through the custom tolerated by public opinion which permits stray dogs, or any kind of dogs, to roam at large, among children especially, without any control whatever.

No dog should be allowed off its master's premises unless it is securely muzzled or unless it is accompanied by its master, who should have the dog under control at all times. If such a policy were followed, rabies would disappear from this land. Only recently a near neighbor of the editor who owned a large German police dog—an exceedingly dangerous animal—but who kept the animal under leash on his premises most of the time, as all good citizens should do, was bitten by a rabid dog which strayed by the premises at night. All of the family, consisting of five members, were exposed to the infection, and all of them have had to submit to the very painful Pasteur treatment. It has resulted in much anxiety in the community, especially among the families having young children members, to say nothing of the great distress of the family involved. Some irresponsible character allowed his dog to roam around the country and was responsible for this serious trouble. It is nothing but bad citizenship, and there should be some way to deal severely with such citizens.

* * *

THE editor was favored sometime ago with one of the friendly visits of Dr. N. C. Daniel, of Oxford. In the course of Doctor Daniel's visit, Doctor Parrott and the editor being present, the discussion naturally drifted into the necessity for support of health department work from a practical standpoint. Doctor Daniel has been a member of his county

board of health for a long time and has worked for an efficient health department in Granville County as well as paying especial attention to organizing the medical profession in that county, enabling them to extend competent prenatal medical service to a large number of expectant mothers in that county who are unable to provide themselves with the services of a private physician.

The reason for especial mention of this visit of Doctor Daniel is to pass along a statement he made. Naturally a large number of physicians and other citizens of the State call at the State Department of Health at frequent intervals. Their visits are always helpful and appreciated by the officials of the State Board of Health. Doctor Daniel, in describing his recent efforts for a little more substantial support, stated that recently he had been urging his county board of commissioners to increase the appropriations for health work in that county in order to extend the activities of the health department and to strengthen the work for the benefit of the people. He stated in his argument that the money value of an ordinary school child's life or that of any other young adolescent person could not be less than five thousand dollars. He stated that when a county decides that it cannot appropriate as much as five thousand dollars to an efficient county health department budget, it seems to be proof that the county—the people acting through the county board of commissioners—is not willing to put up enough money to save the life of one solitary child.

It seems to us that this argument is unanswerable. It places life and the value of human life up against the school of thought which holds that the dollar is more valuable than anything else on earth; that if there is any sacrifice made, it must be of life, and not of dollars.

* * *

EVERY week the editor receives a narrative report from each one of the eight staff nurses employed by

the Department of School Health and Maternity and Infant Hygiene describing the work that they are doing. Each nurse works in a separate county, and her work is confined to counties having no organized form of whole-time health department. There are yet nearly fifty counties which come in this category. As these lines are being written a report from one of the nurses happens to come to the desk from a western North Carolina county. The nurse says:

"This week I have been working in the small schools and have found so much work that should have attention at once—and still I know that this cannot be done under the present system—that it is depressing. The parents that could and are able to have their children treated will not, and the ones that cannot, of course, have no way to get the treatment done, even if they wanted it. I am finding a great deal of malnutrition in this section. I am not surprised, however, to find it when I look into the children's mouths and see the terrible condition of so many of their tonsils and the bad teeth that I find in so many of their mouths. These two sources of infection counteract all the efforts at proper diet which might be undertaken."

This nurse goes on to relate that recently a child from that county died on the operating table undergoing an operation for removal of diseased tonsils. She says that this had frightened nearly every family in the county. Such an accident serves as an excuse to parents who have children needing an operation for not making an effort to have it done.

Beginning in 1919 and ending in 1931, this department of the State Board of Health conducted a series of what was pleased to be called "Tonsil Clinics" in eighty-six of the one hundred counties of North Carolina. Before that work was instituted it was utterly impossible to get the average parent to consider a tonsil operation. They looked upon it as dangerous in the extreme; it was too expensive to even think about undertaking; and there were only a few specialists available to the majority

of the people, and they lived only in the larger cities, such as Asheville and Raleigh.

These clinics were devised by the writer of these lines chiefly for two purposes: First, to convince the parents of children who had excessively diseased throats that a tonsil operation could be done with reasonable safety and with great benefit resulting to the children. Second, to introduce the people of the State to competent specialists in the various larger places of the State who were thoroughly capable of doing this operation without sending the children to Baltimore or Richmond or other out-of-the-State places, also to encourage the location in the secondary towns and smaller towns of the State of competent operators.

Every safeguard was thrown around these clinics. The clinics were conducted at county-seat towns, as a rule. The temporary hospital outfit was set up in a schoolhouse. The clinics ran for four days, fully manned with competent nurses, medical assistants, and a thoroughly qualified surgeon operating. These clinics were conducted in the summer, and during the twelve years in which the enterprise lasted 23,211 children were operated on.

There was only one death occurring in the clinic in all these series of twelve years. That death was in a child beyond the age limit, who had been refused admission to the clinic on account of age and because of a heart lesion. After the clinic was over, the specialist doing the operating, one of the best in the State, consented to take the risk if the parents and the family physician insisted. The child was in a hopeless condition, and operation seemed to be the only way out, as the heart lesion was thought to be caused by the continual infection coming from the diseased tonsils. The child died as a result of local anesthetic before the operation was started. One other child in one of the clinics went in swimming a few days after the operation and got the throat infected and died.

There has been no better record and no lower mortality in the history of American medicine than this series of operations.

One result, however, which was fully contemplated, but which will adjust itself, was that some physicians felt that there had been too much agitation about tonsil operations and that too many children were being operated on for tonsil removal and that their health would not be improved; in short, that the tonsil operation business was being overdone.

This is a perfectly natural inference which might have been expected among people who did not fully inform themselves concerning the screening or sifting process before children were accepted for operation in these clinics. Before a child was operated on, it had to be definitely agreed by the parent, the nurse, the teacher, the family physician, the medical anesthetist with the clinic,

and the operating surgeon that such an operation was definitely needed and could promise improvement in the child's health.

To every physician or parent who has the idea today that a tonsil operation is frequently done when not needed, we would suggest that they simply go into their own schools where their children attend and ask permission to look into the throats of the children composing almost any schoolroom, especially in the lower grades, of the State, and see for themselves the decayed teeth and the diseased throats that will confront them. No wonder we are having malnutrition troubles right on in North Carolina. This does not mean that this is the sole cause of malnutrition. Far from it. The vicious food habits and lack of information about the preparation and selection of food is material for a big book in itself when applied to the needs in North Carolina along this line.

Tuberculosis—The Supreme Importance of Early Diagnosis

By C. H. COCKE, M.D., F.A.C.P., Asheville, N. C.

JUST a few decades ago tuberculosis killed approximately two hundred thousand people in this country annually. The death rate was about 186 per 100,000 of population. The Great White Plague, as it was then called, was easily the chief cause of death, and largely claimed its victims from those in the prime of life. It was destructive because generally discovered too late for help. In 1933 the death rate per 100,000 of population in the United States was somewhere between 56 and 70; the exact figures are not at present available. Ten years ago the insurance companies paid approximately one-eighth of their death claims for tuberculosis; last year the amount was only about one-sixteenth. And

yet, in spite of this tremendous drop in the death rate, tuberculosis still causes approximately eighty-five thousand deaths annually in the United States. For every death there are five or six times this number of people suffering from active tuberculosis at any given time, and perhaps an equal number in an inactive state—potential invalids.

Tuberculosis is largely acquired by contact with another individual suffering from the disease, and hence each one of these half-million or more patients is a potential source of danger to others.

The economic burden of such a disease is vast. The Federal Government alone spends many millions annually on the tuberculous ex-service men. In spite of the splendid reduction in the mortality rate, in spite of

*Radio address delivered over Station WGN, Chicago, Wednesday, April 18, 1934.

increasing knowledge of the disease and its prevention, in spite of greatly increased skill in the care and successful treatment of it, tuberculosis still seeks and finds its victims in the prime of life, and kills more people between the ages of 15 and 45 than any other disease. One out of every five people dying between the ages of 15 and 45 dies of tuberculosis; and one out of every three women dying between 15 and 30 dies of tuberculosis. So you can see that though the fight against tuberculosis is encouraging, and we are gaining yearly, it is still far from won. Tuberculosis is still a menace to be overcome.

Briefly, what are the known factors that have contributed to the improvement in the situation mentioned? Brevity of time forbids all but the briefest mention of the most important ones. First I would place the great improvement in the status of living of most of our people incident to our higher economic standards of life. Along with better housing, better clothing, and better food, there have been the general sanitary and hygienic activities of our governmental units, rural urban, and Federal. Improved sanitary regulations, better housing laws, water, food, and milk inspection, and quite notably the tuberculin testing of dairy herds to eliminate the possible source of infection from dairy cattle, have been important aids, not only in the fight against tuberculosis, but in the maintenance of better health conditions generally. The contribution of the national, local, county, and state tuberculosis associations to the enlightenment of the public and the stimulation of its interest in tuberculosis, with the natural corollaries of school inspections, periodic physical examinations, tuberculin testing, and allied activities, has been and still is a credit to the leaders of these organizations, as well as an enormous benefit to the public. The building of sanatoria and preventoria, and open-air schools by cities, counties, states, and the Fed-

eral Government, in addition to the countless private institutions for the care of the tuberculous, has served the dual purpose of giving the tuberculosis sufferer a better chance to regain his health and at the same time remove him from the contact of family and business associates, where he might well be a source of danger.

And last, but by no means least, I must stress that most important factor in both prevention and cure—early diagnosis. To cure tuberculosis (and let me emphasize here that it is a curable disease in much larger measure than was ever thought possible just a few short years ago) much more is necessary than the mere knowledge that one has the disease. Obviously one cannot postpone till a suitable time the recognition of the disease once it is manifest, just because its cure entails months and months of inactivity and abstention from business and social affairs. In hardly any other disease is it more truly axiomatic that the patient's chances of recovery are in direct ratio to the earliness of discovery than is the case in tuberculosis. Almost all early cases, with certain rare exceptions, can be cured; many moderately advanced cases can, also; but the far-advanced case presents a more difficult, a more prolonged, a much more expensive, and a much less hopeful problem, though even here much is now accomplished by modern treatments.

If early discovery is the best means to acquire a successful cure, how is this done? There is no easy way, no simple formula save one—eternal vigilance and intelligent suspicion. I do not mean inordinate fear of the disease. That of itself is harmful and to be avoided. You ask how one may be careful and suspicious, and yet not unduly fearful? By remembering a few well-known things about this disease. To begin with, it is no respecter of person or position; any one may have it. Again, it does not commonly have a spectacular beginning. Its symptoms in mild form may

come and go; and you may be unaware of their nature, for it is a disease of progress and regress, of improvement and relapse. But these things you must guard against and seek relief from: an undue tendency to repeated colds; a cough that persists more than two or three weeks—slight, perhaps, but easily excited by dust, irritants, smoke, variation in the temperature of the air, by bodily exertion or change of position, and especially if it produces expectoration. The spitting of blood should call for the most careful chest examination by a properly qualified physician. There is no more popular fallacy than that blood may be spat from the throat. Ninety-five times out of one hundred blood-spitting means tuberculosis, if it comes from the chest. Pleurisy or chest pains, especially if exaggerated by a deep breath, generally mean the same. And then those indefinite and all too easily neglected symptoms, because they are not painful nor spectacular; slight but gradual and steady loss of weight; poor endurance and fatigability out of proportion to one's efforts, especially notable in the morning before any physical exertions have been made; digestive disturbances and lost appetite without any recognizable reason; temperature variation from the normal, not great, but accompanied probably by slight chilly sensations, especially after meals. If you have these, if there has been a rectal abscess perhaps some months or even years before, don't be frightened and avoid examination. Go to your doctor, your dispensary, your hospital; ask for a careful examination, including X-ray pictures; and of two things you may rest assured: first, if you have no tuberculosis, no harm has been done, and a load has been lifted from your mind; and second, if present, fortunate you are to discover it when it offers not only the best chance of recovery, but a type of recovery beyond the possibility of those in the advanced stages, and at a cost not

remotely proportionate to what it will cost you later.

In the splendid campaign against tuberculosis in this country the leadership has largely been by those who have overcome the disease themselves. You can do so if you face facts squarely and honestly. There are usually only two rational explanations of delayed diagnosis—fear and unwillingness on the patient's part to seek the doctor, or failure on the physician's part to be always alert and suspicious as well as thorough in his examination. You cannot afford generalities, such as nervousness, a rundown condition, and so on. These rarely produce symptoms referable to the chest. Since delay is dangerous, fear and ignorance inexcusable, and the consequences of neglect incalculably expensive, insist on a careful, complete examination. All consumption is tuberculosis; all tuberculosis need not become consumption.

In summary, then, the prime reasons for seeking an early diagnosis are:

1. Physical, because earliness of diagnosis offers the best chance of cure, and a better cure than can be had later, with the grave danger of tuberculosis and other complications.
2. Economic, because early or minimal tuberculosis costs infinitely less than advanced disease to cure—less money, less time, less future hazard of relapse.
3. Social, because early tuberculosis requires less hospitalization, is less apt to be a prolonged menace to family and others, and is less apt to affect one's business and social contacts.

Why?

Some months ago the editor noted posted on the door of a dentist the following statement in 30-point type:

"Why your Grade A milk through an unclean mouth?"

After all, the only answer we had for the question was, Why?

Colds

By NEWTON G. WILSON, M.D., *Madison, N. C.*

IN North Carolina the condition known as a bad cold, or as the common cold, is the one disease that attacks all of us. No one seems to be immune to it at all times. It is said to be the cause of more morbidity and the loss of more days from school and work than all other diseases.

The causes of colds are probably complex in many if not most instances. The name suggests that it was supposed to be the result of chilling. However, the chilliness that is felt with the coming on of a cold is the result of the condition and not the cause. The principal causes which diminish resistance to colds are: wet and cold, fatigue, insufficient food, unsuitable food, excess of food and poor elimination, vitiated atmosphere, insufficient sleep and rest, worry, and excesses of all kinds.

Immunity or resistance to disease is the very foundation of all preventive medicine. Unless immunity and resistance are considered in the causation of colds it is impossible to understand why some people almost constantly have colds and others rarely, when all have nearly the same exposure to others who have the disease. Immunity is the overshadowing factor in hygiene. It is a function of all living beings, and in its widest form is one of the fundamental properties of life. It may be defined as the power which certain living organisms possess of resisting infections. Resistance to colds in most children and many adults is lowered by overeating of non-essential foods, such as candy, rich cakes, syrup, preserves, molasses, and other highly concentrated foods. The food intake contains a greater number of calories than is needed for the fuel of the body and the excess is a tax upon the organs of elimination. Children who are heavy eaters of the type of foods mentioned, almost invariably, have

large tonsils and adenoids. Such children have frequent colds and recover from them slowly. The great Osler says, "Children with adenoids are especially prone to take cold." Resistance, however, may be built up by a diet which contains a sufficiency of the essential foods and only a little of the non-essential foods. By the essential foods is meant fruits, fresh meats, fish, vegetables of the leafy variety, beans and peas, fresh milk, eggs, butter, cheese, etc. Such foods contain vitamins and the chemical elements necessary for tissue building, and for the maintenance of the tissues of all organs in a condition of health.

Colds are due to the invasion of the tissues of the nose and throat by pathogenic micro-organisms. There is a constant battle from birth until death between death-dealing germs (most of which normally inhabit the mouth) and the resistance offered by the various and complex mechanisms which constitute immunity. Milton J. Rosenau, who has done such outstanding work in the U. S. Public Health Service, and as professor of Preventive Medicine and Hygiene, Harvard University, says:

"Bacillus carriers play an important rôle in spreading infections. They explain many mysterious facts in the epidemiology of diphtheria, typhoid fever, cholera, cerebrospinal meningitis, malaria, etc. The bacillus carrier is sometimes a danger to himself. This is seen in diphtheria, pneumonia, influenza, and sometimes in typhoid and cholera. Thus, a person may carry the pneumococcus in his throat for years, awaiting certain favorable conditions for infection before he contracts the disease. The same is more or less true of other carriers."

As stated previously, colds are due to invading micro-organisms, many of which are constantly present in the mouth, nose, and throat. In conditions of health these germs do not

invade the mucous membrane and tissues beneath. They are held in check by the defensive mechanism of the body, which constitutes immunity. Immunity in most cases is a relative term, and as it concerns colds is never absolute. Resistance may be built up and maintained by proper diet, sleep, rest, regular hours, and exercise that will give immunity against colds except under conditions, such as contact with an overwhelming dose of virulent germs from another person.

Colds are both infectious and contagious, and contact between persons who have colds and those who do not spreads the contagion. The germs are contained in moist secretions from the mouth, nose, and throat. Use of a common drinking cup, towels, and dishes may convey the disease from one person to another. Coughing and sneezing throws into the air moist droplets of the contagion which may be inhaled by those near. The contagion is spread more easily in crowded, poorly ventilated rooms. School auto-trucks, unless kept well ventilated, are favorable places for the spread of the disease.

Not all those exposed to fresh colds (even the most intimate contact with them) will contract the disease. This is due to the general resistance they have built up by proper hygiene as outlined heretofore.

Many colds are contracted without exposure to others who have colds. As previously stated, the germs that cause colds are normally present in the mouths of nearly all persons of this section of the country. In such cases the resistance to infection has been lowered by one or more of the many ways, such as fatigue, insufficient food, unsuitable food, excess of food and poor elimination, vitiated atmosphere, insufficient sleep and rest, worry, and excess of all kinds. On the other hand, there may be an inability to properly build resistance

by the lack of a diet that contains the necessary vitamins and chemicals to maintain the body in a constant state of health. The essential foods can be had by everyone, and they are the cheapest and safest form of health insurance. Children or adults with infected teeth and tonsils and with adenoids are more susceptible to colds. But here again the same factors of diet, etc., are largely responsible for the condition of teeth, tonsils, and adenoids. Probably one of the most common causes of colds in otherwise healthy individuals who have not been exposed to the infection is excess in eating and drinking. The eliminative organs are overwhelmed temporarily by the amount of metabolic products they are called upon to throw off. The defensive mechanism is lowered by the toxic products remaining in the tissues, and the invading germs march into the now defenseless territory and establish themselves in temporarily impregnable redoubts. The battle rages furiously for a shorter or longer period of time until the defenses of the body win the battle.

This battle is not won without cost both present and future to the human organism wherein the battle was fought. Although in most instances both clinical and laboratory examinations fail to show any lasting impairment to the various organs of the body, it is reasonable to believe that the disease with its congestion of certain tissues, its tax upon the circulatory and eliminative organs, and the distribution of its toxic products throughout the system brings old age one step nearer.

Pellagra Deaths

Pellagra deaths have increased every month this year over 1933 except during the months of May and July. For the first nine months of this year 329 deaths from pellagra were reported. During the same period in 1933 only 301 pellagra deaths occurred.

Gaston County Nutritional Camp

By STEWART ATKINS

THIS summer thirty-eight boys and girls in Gaston County were snatched from the grasping hands of disease and malnutrition, and were physically remodeled.

The remodeling agency was the Gaston County Children's Nutritional Camp. The boys and girls were selected from a list of applicants that ran into the hundreds, as the thirty-eight worst in need of the beneficial treatment the camp could give them. They entered the camp victims of chronic irregularity in habits, undernourishment, wrong diet, low disease-resistance. They emerged strong, healthy, tanned from constant contact with the sun and hardened by sleeping in an outdoor dormitory, with only necessary screens between them and the enlivening fresh air. It was a seven-weeks job.

And it was not the first such health project the Gaston County Children's Nutritional Camp has successfully undertaken.

Back in 1928 a small group of Gastonia women conceived the idea for such a camp. They were Mrs. F. C. Michael, Mrs. G. V. Birmingham, and Mrs. R. Harry Adams. They constituted the Gastonia Christmas Seal committee, which like hundreds of similar committees throughout the Nation had as its object the sale of brightly colored package seals at Christmas-time to secure funds with which to fight the dread scourge, tuberculosis. All about them, in their work that took them throughout the highly industrialized area of Gaston County, where 104 cotton mills are jammed close together in a few square miles, these women saw the ravages of disease, and the mark it left on underprivileged children.

It became forcefully apparent to them that these children, denied the privileges which were as a matter of course extended to their more fortunate

brothers and sisters in normal walks of life, were being robbed of their inherent rights to become good, solid, substantial citizens in their community, to live out their lives in happiness and usefulness, instead of becoming liabilities to society. These women saw that not only tuberculosis, but many other diseases, notably pellagra, and the unsanitary conditions, unbalanced diet, and sometimes actual hunger that follow in the wake of ignorance and poverty, lay as bars to happiness across the paths these children must follow.

So they did something about it. They had on hand \$1,137 surplus from the sale of Christmas Seals. With it they founded a health camp. Through clinic and X-ray examination, given free by the North Carolina Orthopedic Hospital and the State Health Department, they sifted out from the enormous number of children needing health-camp treatment the few needing it worst whom they were able to take care of at first with their limited funds.

They laid their plans before a group of local physicians and dentists, who proved not only sympathetic with the idea, but enthusiastic over it. These physicians and dentists were Drs. C. H. Pugh, J. S. Hood, J. L. Blair, S. E. Moser, and Chauncey Highsmith.

Next they approached the Gastonia Civitan Club. This body not only heartily approved the plan, but took over temporarily financial responsibility for its continuation, which otherwise would have been impossible after the original fund had been expended.

Next housing facilities were secured in dormitories standing vacant at Linwood Springs, several miles from Gastonia in the country, where a boarding school had been operated in former years.

So, all preliminaries having been

attended to, the camp opened there in the summer of 1930.

Mrs. G. V. Birmingham, a member of the committee which originally conceived the idea of founding the camp, was placed in charge. She is an experienced nurse. Mrs. Birmingham continued in charge through four following successive sessions, bringing the history of the camp to date.

Definite assurance that the camp, which has grown rapidly since its beginning, will continue as a permanent project came this spring when Mr. and Mrs. R. Harry Adams and Mrs. H. G. Love and Mrs. R. S. Cannon, trustees in charge of the estate of W. H. Adams, deeded to camp officials a large piece of property near the southern edge of Gastonia for use as a permanent camp site. A boost toward permanency had already come, in 1932, when, after two years of operation had awakened acute realization of the need for this kind of work in Gaston County, the other three Gastonia civic clubs—Rotary, Lions, and Kiwanis—joined with the Civitan Club in support of the movement.

Support from the civic clubs has greatly helped to make the camp possible. The general public of Gaston County is solidly behind the camp, as evidenced by the fact that camp officials last spring raised \$1,536.88 in actual cash by popular subscription conducted through the columns of *The Gastonia Daily Gazette*. A part of the funds raised through Christmas Seal sales each year has been used for camp operation, and it is hoped that eventually the volume of local Seal sales will be sufficient to carry the entire operating expense of the camp. Expenses of this year's operation were about \$650, while approximately \$800 was invested in permanent equipment. Government-paid CWA labor was used to remodel a large stone house, already on the Adams property and a part of the gift of the Adams estate, into dining-room and kitchen space, nurses' quarters, and recreational rooms. CWA labor also constructed the screened dormitory with facilities sufficient to house fifty boys

and girls. The Gastonia Woman's Club and every County Woman's Club has frequently contributed to funds to defray camp expense.

In addition to cash donations, camp officials have received from the home demonstration clubs of the county, and from the general public, such useful items as food, clothing, games, books, and toys for the children, etc. Local Sunday school departments took turn about conducting Sunday school programs at the camp each Sunday this summer. In 1932-'33 Dr. T. H. McDill was the principal factor in keeping up the interest and contributions.

Drs. C. H. Pugh, A. C. Current, and J. S. Hood, comprising the camp clinic committee, gave free service in inspecting applicants, in tonsil removals, and other adjustments necessary in the conditions of some of the children before it was possible for them to absorb the full advantages of the camp.

Applicants were contacted by the county and city health departments, headed by County Health Officer R. E. Rhyne and City Physician McG. Anders. Doctors and nurses in the health departments contributed materially to the success of the camp through their services. Their knowledge of the health situation among children in various parts of the city and county also proved an invaluable aid.

Present officers and directors of the camp, all of whom have been instrumental in its progress, are: C. W. Gunter, president; Dr. T. H. McDill, vice president; M. V. Whitesides, treasurer; and Mrs. F. C. Michael, J. S. Boyce, Harry Adams, W. B. Hair, M. R. Adams, A. E. Culp, and Trench Brumley.

One girl in camp this year gained as high as 18 pounds. Others made proportionate weight gains, and all showed evidence of many other benefits.

Reports of infant deaths under one year continue to increase. For the first nine months of this year 4,568 such deaths were reported, compared to 3,751 for the same period last year.

Headache Powders and Swimming Pools

THE editor of THE HEALTH BULLETIN was gratified recently to receive a letter from Dr. James K. Hall, of Richmond, Virginia. A large number of physicians in this section look on Doctor Hall as one of the foremost and ablest physicians in the United States. He is one of the most distinguished members of the profession in the South, and North Carolina is proud to claim him as one of her successful native sons.

Doctor Hall wrote his letter without expecting it to be published. The editor felt, however, that his comment both on the headache-powder article and the swimming-pool article in the September issue of THE HEALTH BULLETIN was so important that Doctor Hall consented to have the letter published.

We take pleasure in presenting to our readers Doctor Hall's letter, as follows:

DEAR DOCTOR COOPER:

I always read with profit and generally with pleasure your HEALTH BULLETIN. I have been especially interested in the September issue of the BULLETIN in "Headache Powder a Cause of Death." Such things as headache powders and other harmful proprietary drugs are advertised most liberally. I think, in the so-called religious publications—the publications that think, for instance, that alcohol is the most deadly poison in the world and that liquor drinking is a terrible sin. I do not drink whiskey nor advocate that others do so, but I think alcohol as a beverage is infinitely less harmful than the acetanilid-containing powders. I am glad you are hitting these things.

In what you have to say about swimming pools I am wondering if in speaking of their beneficial use by children you are speaking without knowledge of what some, at least, of the nose and throat specialists think about public swimming pools. My little boys have been accustomed to make use of the swimming pool here in one of the suburbs of Richmond, a pool that is kept as clean, I suppose, as a

public pool can be kept; yet before the summer was far advanced two of the boys developed middle-ear trouble and the throat specialist advised me to keep them out of the pool. He told me that he thought a great deal of middle-ear trouble was due to swimming and diving in public pools.

Faithfully, J. K. HALL.

The reader will note that Doctor Hall is even more emphatic in his condemnation of the excessive use of acetanilid and allied drugs than the editor was in his September article. We particularly appreciate Doctor Hall's statement in this respect.

We appreciate just as much Doctor Hall's statement concerning the danger of middle-ear infection contracted in swimming pools.

Doctor Hall and the ear specialist who advised him are undoubtedly right. In writing the editorial on swimming pools, we had in mind simply the favorable form of exercise which swimming affords. The Sanitary Engineering Department of the State Board of Health has promulgated exceedingly rigid regulations governing the operation of every public swimming pool in the State. Doctor Hall, however, points out that, notwithstanding rigid regulations competently carried out, swimming pools must remain a menace to many people.

We pass this information along to parents of children who might be inclined next summer to allow their children to overdo the swimming-pool business.

Price Changes In Laboratory Products

Attention should be called to the change in prices of certain laboratory products. The price list effective November 1, 1934, will be sent to any physician upon request. All physicians desiring this price list, or supplies and products of the laboratory, should address their requests to The State Laboratory of Hygiene, Raleigh, North Carolina.

"The Cure" and Authorship

SHORTLY after receiving the Pulitzer award as author of the outstanding novel of the year, Mrs. Carolyn Miller, wife of a small-town Georgia school man and the mother of several children, was interviewed by a newspaper writer who asked how she managed to devote so much time to her writing without neglecting her family. The article based on this interview was widely published in daily newspapers.

In reply to her interviewer's question, a question that many other persons must have asked in their own minds, she said that she was able to devote as much time to her family as most other women, in spite of her outside work, simply because she devoted to her writing only the time which other women devoted to social life, bridge parties, and the like. She was insistent that her writing did not interfere in the least with her duty to those she loved. Persons knowing her are sure this is true.

There is a lesson here, it seems to us, for those who face the problem of guarding their health after obtaining arrested cases of tuberculosis while earning livelihoods and living as useful members of their communities.

It is usually not the work which one does that causes him or her to have a second breakdown, doctors insist, but the playing that is indulged in after working hours. If, following the good example of Mrs. Miller, those with arrested cases are willing to give up a large share of so-called pleasure and devote the time thus saved to the attainment of worthy objectives—in their cases permanently restored health and in her case the fame and wealth that come with successful authorship—there is no reason why they cannot be successful in both respects.

In the accomplishment of any worthwhile purpose some sort of sacrifice is demanded. A housewife who tries to do her full duty to her family, swim merrily in the social whirlpool, and make a success of some outside

activity, whether authorship or something else, will almost inevitably meet with failure in all three fields, except the least important of the three, society. The young man with a job who takes correspondence courses at night to prepare himself for a better position soon finds out that he has no time for playing the social nighthawk. It is equally true that the person with arrested tuberculosis cannot safely work hard and play hard too. The records of almost any sanatorium prove this beyond question.

The sooner a person makes up his mind as to this, the better are his chances of finding success in his work and equal success in his effort to stay well.—*The Sanatorium Sun*.

Change In Diphtheria Toxoid

After November 1, 1934, alum precipitated diphtheria toxoid will be the product recommended by the State Laboratory of Hygiene for the immunization of children against diphtheria. The superiority of this product over the Ramon diphtheria toxoid and toxin-antitoxin has been demonstrated. One dose of the alum precipitated toxoid will produce immunity in a higher percentage of children than three doses of the Ramon toxoid, or five doses of toxin-antitoxin. In addition, less time is required for the development of immunity when the alum toxoid is used. Not infrequently children are rendered immune within six weeks after they are given the alum toxoid.

Since the alum precipitated toxoid is more expensive to produce, it will be necessary for the laboratory to charge \$1.00 per ten cc. vial, or 15c per one cc. vial. At present the laboratory cannot distribute this material free of charge. It may be possible, after April 1, 1935, that this product will be available for free distribution, provided the laboratory is supplied with the names and addresses of children to whom it is administered.

No Substitute For Food

THERE is grave danger that large numbers of young people — young women especially — will be so influenced by certain types of cigarette advertising as to depend upon Lady Nicotine instead of proper food for the physical strength they need for their day-to-day activities.

Sometime ago a large cigarette manufacturer, recognizing the prevailing feminine fear of becoming unbecomingly stout and seeking to capitalize it, put on a nation-wide advertising campaign urging women readers to smoke a certain brand of cigarette—its brand, of course—instead of yielding to a hunger for candies and other sweets. As this campaign has been described as a success, it is evident that it induced large numbers of women to divert a large share of their expenditures from the candy stores to the purveyors of cigarettes. No doubt many of them warded off obesity by doing so. Unfortunately, however, it is also almost certain that large numbers of them escaped overnight only to risk an infinitely greater peril, disease in many forms, especially tuberculosis.

More recently a cigarette manufacturer has made another appeal to prospective women smokers by trying to make them believe that vivacity, cheerfulness, "pep," and the other desiderata of would-be social successes need not be sought after by the slow, uncertain method of cultivating personality and friendliness and intelligence and likability, but, instead, can be obtained in almost the twinkling of an eye by smoking a certain brand of cigarette. The advertisements are made more appealing and, to the unthinking, more convincing by the use of attractive illustrations.

Actual and potential tuberculosis sufferers—and these two groups constitute the entire human race—should not allow such alluring advertisements to disturb their faith in the tried-and-true methods of insuring "pep" and

those other desirable qualities we have mentioned. They should be especially wary about relying upon a certain brand of cigarette to take the place of good, wholesome food, nature's best ally in building strong, disease-resisting bodies and real personality, which need not fear the competition of those depending for personal attractiveness upon following the advice of high-pressure advertisement writers.—*The Sanatorium Sun*.

TOO BUSY TO LIVE

For persons afflicted with hurryitis:

He hadn't time to greet the day,
He hadn't time to laugh or play;
He hadn't time to walk a mile,
He hadn't time to even smile;
He hadn't time to glean the news,
He hadn't time to dream or muse;
He hadn't time to train his mind,
He hadn't time to be just kind,
He hadn't time to see a joke,
He hadn't time to write his folk;
He hadn't time to eat a meal,
He hadn't time to deeply feel;
He hadn't time to take a rest,
He hadn't time to act his best;
He hadn't time to help the cause,
He hadn't time to make a pause;
He hadn't time to pen a note,
He hadn't time to cast a vote;
He hadn't time to sing a song,
He hadn't time to right a wrong;
He hadn't time to send a gift,
He hadn't time to practice thrift;
He hadn't time to exercise,
He hadn't time to scan the skies;
He hadn't time to heed a cry,
He hadn't time to say good-bye;
He hadn't time to study poise,
He hadn't time to repress noise;
He hadn't time to go abroad,
He hadn't time to serve his God;
He hadn't time to lend or give,
He hadn't time to really live;
He hadn't time to read this verse,
He hadn't time—he's in a hurry.

—*New York Times*.



MR. JNO. G. DEARD,

CHAPEL HILL, N. C.

The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD OF HEALTH

This Bulletin will be sent free to any citizen of the State upon request.

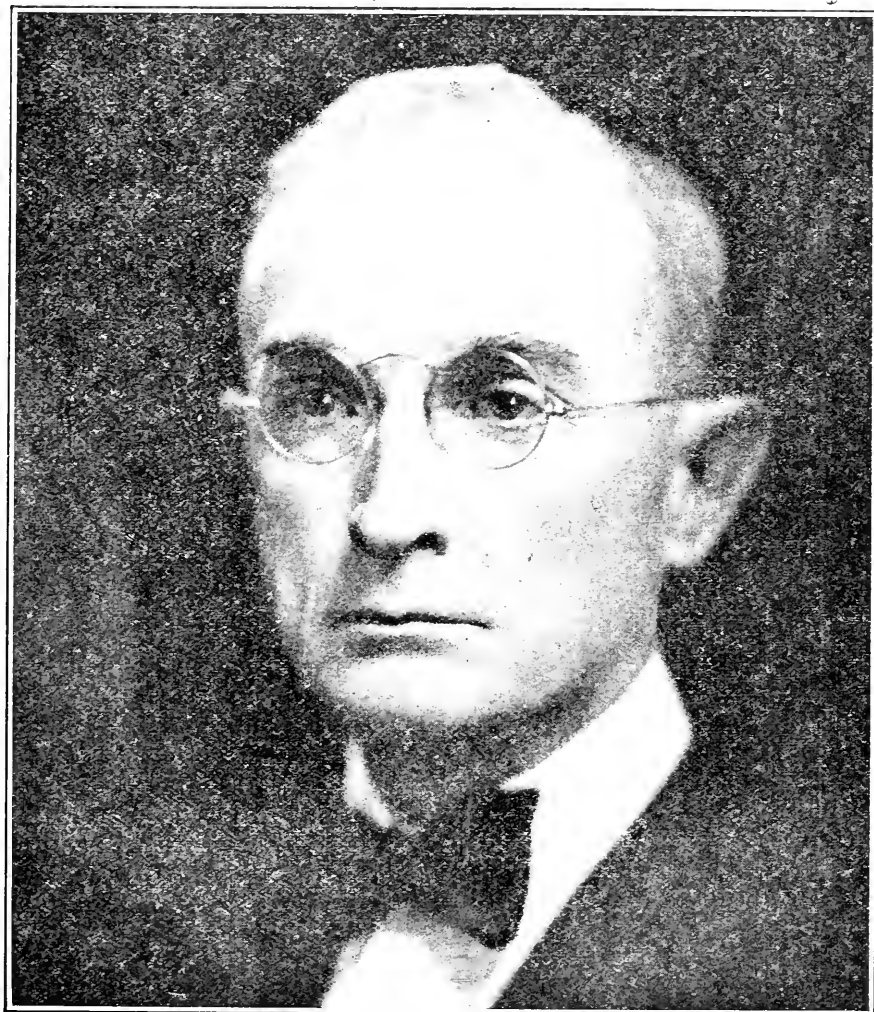
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JAMES MARION PARROTT, M.D.
State Health Officer

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Scarlet Fever
Cancer	Health Education	Smallpox
Constipation	Hookworm Disease	Teeth
Chickenpox	Infantile Paralysis	Tuberculosis
Diabetes	Influenza	Tuberculosis Placards
Diphtheria	Malaria	Typhoid Fever
Don't Spit Placards	Measles	Typhoid Placards
Eyes	Pellagra	Venereal Diseases
Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough
	Sanitary Privies	

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine	5 to 6 months; 7, 8, and 9 months; 10,
monthly letters)	11, and 12 months; 1 year to 19 months;
Minimum Standards of Prenatal Care	19 months to 2 years.
Breast Feeding	Diet List: 9 to 12 months; 12 to 15
Infant Care. The Prevention of	months; 15 to 24 months; 2 to 3
Infantile Diarrhea.	years; 3 to 6 years.
Table of Heights and Weights	Instructions for North Carolina Midwives.

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A CHRISTMAS STORY

By THE EDITOR

IT happened in early October, but the story should be told again in the spirit and atmosphere of Christmas, the one big festival for the children in all Christian lands. The story did not make front page; in fact it was not much of a news-story, and attracted very little attention. The editor of THE HEALTH BULLETIN happened to see it in an obscure place in the Raleigh papers at the time. But a world of tragedy and heartbreak was packed in the two or three paragraphs.

The story: Three half-orphans, two brothers and their sister, ages 7, 9, and 11, ran away from a Raleigh orphanage one night and started back to their "home" in or near Oxford. Next day the orphanage authorities located them at Durham. The reporter did not think enough of it to state how they got to Durham. The father of these little ones is dead, their mother living but unable or unfit (the paper did not say which) to care for the children. So a kindly church organization placed them in the church orphanage. There they are provided with creature comforts, food and shelter, some school advantages and some religious training until they reach the mature age of sixteen, when they must get out to make room for more unfortunates. No criticism should be directed toward the authorities of the orphanage. They are presumably doing all in their power to care properly for the hundreds of little ones packed in under their care. The editor has children of his own to love and worry over and provide for. Years ago he suffered the agony of seeing one of his baby girls pass out on the long journey alone. For more than a quarter century his work has been carried on for the children of North Carolina. But he has never looked on a picture of more poignant desolation than these three little ones attempting to find their way back to a home that is no more. These are troubled years, and in all such times the weak and the helpless suffer first. Those who know say that there are thousands of orphans and half-orphans in this State, and, what is worse, other thousands of children in broken and unfit homes. One does not have to be an expert in mental diseases to know that much delinquency and crime result from neglected childhood.

This year when you help your children hang their stockings by your own comfortable fireside may you have the satisfaction of knowing that you have done your full share for such as the three weary, homesick little plodders on the road from Raleigh to Durham. If you do not have such satisfaction, perhaps it is not yet too late.

Notes and Comment

By THE EDITOR

IN all Christian countries December is a month in which especial consideration is always shown to old people and to children. This is just as it ought to be. The son and daughter who have gone out from the old home into the world—perhaps to distant parts—to make a living always remember their parents at this time with especial consideration—that is, all of them who are worthy of their parents. The younger boys and girls who are fortunate enough to be off at college always anticipate with pleasure the visit back home for the holidays at Christmas, in which they can be with the old folks and others of their home communities. Naturally it is the great season for the children. This also is as it should be.

There are many homes, however, in which old people are not happy. Many of them undergo hardships when one or the other partner is taken by death, the home broken up, and the remaining partner must move away to live with a son or a daughter. In many such instances the household of the son or daughter has children of their own, income is frequently not adequate to supply the needs, especially the wants of the family, and it frequently happens that the old person living in such a home comes to be regarded as an additional burden. This should never be the case, but all of us know that it is. Frequently there is selfishness among the sons and daughters who have settled in their own homes, and each wants the other to care for Father or Mother. Elderly widows suffer much more in this respect than old men. Both, however, suffer a great deal in many cases. In the still uncivilized regions of earth old people are neglected, and even murdered in some savage tribes.

Adequate care and protection for the aged and infirm is a corollary of

Christianity. Before the beginning of Christianity little attention was paid to the needs or wants of old people; they were frequently left to die of exposure and starvation when they reached the point that they could not care for themselves.

Since we have been charged with the responsibility of editing *THE HEALTH BULLETIN* every month for a long number of years we have been more and more impressed with the interest manifested in contents of *THE BULLETIN* by old people. It has caused us to feel acutely the needs of older people in matters of taking care of their health. As a rule, when an individual reaches the age of sixty or sixty-five, the fires of ambition have for the most part died out; no longer is there desire to shine socially, politically, or in the commercial world. The chief ambition of most people who are past sixty-five years of age is to surround themselves with creature comforts and to be free from the various ailments of declining years. For such of our readers as constitute this large class we endeavor at all times to have something of helpful interest in each issue of *THE HEALTH BULLETIN* which will comfort them.

Not long ago, in coming through the prosperous town of Dunn, having for once a few minutes time to spare, we recalled that a couple of old friends, whom we had not seen in many years, lived there. We decided to call on them. It was one of the first chilly days of autumn, and we found them in their cozy cottage by an open fire. He is eighty-three years of age, and she is, of course, younger. But in spite of their advanced years both of them are alert mentally and just as interested in people and things as they were at thirty. He is, of course, a little deaf, but when his wife succeeded in getting him to understand who we were, and that we worked with the State Board of

Health, his face brightened up and he remarked, "Well, he may know something about where they issue THE HEALTH BULLETIN." It is hardly necessary to say that after he understood that we were the editor of THE HEALTH BULLETIN the next half-hour was one of mutual interest to us both. They said they looked for THE HEALTH BULLETIN each month; as the time for its approach appeared, they watched the mailman each day with anticipation, speculating on what we might have that would be of particular interest to them in that particular issue.

We pass this little personal note along to our readers at this time because we want them to understand that the range of interest among the readers of THE HEALTH BULLETIN is just as high and just as wide as all the races and ages of people in the State. We have found that our older readers are interested in such questions as food and clothing, freedom from colds and coughs and the various aches and pains that come on usually with advancing years.

It is not much comfort to old people who may be suffering the consequences of dissipation or irregular habits in early life to say that the time to prepare for a comfortable old age is in youth. But such is the case. If young people could be made to realize in their very early years that the habits of living which they acquire for themselves in their earlier years will largely determine their own longevity and their physical comfort, a majority of them would probably safeguard their health much better.

The average adolescent youth looks on the old people of his community as representing an eternity of difference in age. They look ahead to the years that may stretch out before them as an almost never-ending procession, that there need be no occasion for worry or care, that youth will last so long that there will be plenty of time to adopt a different

method of living at some time far in the future. They realize the mistake when it is entirely too late to do much, if anything, about it. But not so with our old friends at Dunn. In their youth they mapped out a well-planned life, and hence at eighty they are just as interested in the world and its affairs as they were at fifty.

We wish for our two old readers at Dunn, and the hundreds of others like them all about in the State, a happy Christmas and a contented New Year, as free as possible from the ills and discomforts common to seventy-five and eighty.

* * *

SOMETIME ago Mr. George M. Manning, of Louisburg, a long-time reader of THE HEALTH BULLETIN, wrote to us and suggested that we discuss again the increasing trend of suicide. We immediately wrote to Mr. Manning and asked that he prepare us a short article giving his views and offering suggestions about this tragedy. Mr. Manning immediately complied, and elsewhere in this issue we are publishing his article, in which he quotes eminent authorities in the country and offers some suggestions that, if put into practice universally, would undoubtedly result in preventing a great many of these tragedies.

Since getting Mr. Manning's article sometime ago, we have learned of the death by suicide of two men—one an elderly man of seventy-one, a friend of our boyhood, a man who had lived a hard but useful life, who was a good citizen, and who reared a large family of children, all married and settled in homes of their own. This man had been a deeply religious man. He had found solace and comfort in his religion. He must have had a clean conscience, because he lived an honorable and upright life. He lived in a home of his own, in a healthful locality, where he had been happy for many years; and yet on a beautiful autumn afternoon, while the rest of the family were occupied, he took a shotgun and

walked out on his porch and ended his life. No one knows what was passing through his mind; no one can tell why he did this act. His health had been poor, he was suffering from many ills, and it is probable that he despaired of ever being comfortable again, and, having lived an active life in rearing his children and providing for his family, on finding himself a useless adjunct, it unbalanced his judgment and he forthright took his own life.

The other instance, reported in the daily papers, was of a young man of twenty-six. His parents had been warm friends of the editor long years ago. They represent one of the foremost families in their section of the State. In the language of the street, they had everything; that is, health, social standing, education, friends, and a sufficient income for a comfortable living; and yet, unexpectedly and without any reason being apparent, this fine, upstanding young fellow of twenty-six suddenly and precipitately ended his own life.

Mr. Manning, in his article, quotes someone as saying that if the friends and kin of all people who are likely to commit suicide would be alert and do their full duty, there would be fewer suicides. This is probably true. It is very hard, however, at times for the relatives and close friends of an individual who may be contemplating suicide to always realize in time the thoughts of such individual, in order to veer them away from the impulse. The prevalence of suicide, however, should serve to illustrate to all of us the importance at all times of lending a helpful and sympathetic hand to our fellows. The journey through life is difficult enough for all of us when we receive the sympathetic aid of our fellows; but it is doubly difficult when we are misunderstood and antagonized—by our friends and relatives particularly.

We would suggest that you read Mr. Manning's article and look about

you and endeavor to extend friendly help where it is needed.

* * *

ONE of our nurses reports that some time in the autumn, in the course of her work among the school children and the mothers and young babies of the county in which she was working, she had occasion to visit a woman who was suffering from a severe attack of typhoid fever. The woman was the mother of five children, the wife of a tenant; and the past summer the whole community was offered free immunization against typhoid fever by the county authorities. Practically every one of the neighbors availed themselves of the opportunity to have their families immunized, but in this case the landlord objected to their losing time out from the crop and forbade them the use of the wagon or buggy to take the family to the place where the vaccine was given, and also refused to allow them to lose time enough from their crop work even to walk.

The result in this case, of course, was tragical to the family, and particularly to the five children, and in the end the landlord probably lost much more than he would have in the short time it would have taken this family to make the three separate trips to receive the vaccine. On the other hand, we have known of many instances—in fairness to the landlord—where the landlord has given his permission to such families and even urged them to go and take advantage of it; but due to ignorance or prejudice or fear, families have refused to avail themselves of the treatment when offered, and provisions made for their getting it, only to have typhoid fever later.

* * *

IT has been nearly three years since a death from smallpox has been reported to the North Carolina State Board of Health. This is the longest period of time in the history of the vital statistics of the State that this

disease has not caused one or more deaths.

We are reminded to make these remarks by reading an advertisement in a magazine some days ago calling attention to the fact that less than two hundred years ago identification of criminals in certain instances were advertised to the effect that the criminal being searched for was not "pock-marked," and had thus never had smallpox. In other words, so universal was the presence of pock marks on adult individuals at that time that

the man or woman who did not carry the marks of severe attacks of smallpox was an unusual individual. Also at that time about 50 per cent of the population in some cases died of smallpox before reaching the age of thirty or forty years.

The only reason why such a condition does not prevail today is because of preventive vaccination. It is well to keep repeating these facts so that our people may not make the mistake of rearing their children to adult life without this protection.

Suicide

"If Friends and Kin of Those Ready to Surrender Would Do Their Full Duty, Fewer Would Be Ready to Leave Life"

By GEORGE M. MANNING

ASKED by the editor to prepare an article for THE HEALTH BULLETIN on the subject of Suicide, it is presumed that he thought I could do so, as I had long been interested in the matter and had also conferred with some of the notable medical authorities in their field on this particular subject. While I am not competent to inform the public, yet as one interested I am willing to try to help check this suicidal trend or tendency in any way possible. I do not know fundamentally what suicide means. Is the person who commits the act always insane? History tends to deny that assumption. If not, however, it would seem easier in many instances to prevent its occurrence.

It appears that Mr. George P. LeBrun expressed the acme of earnestness in his opinion that—

"If friends and kin of those ready to surrender would do their full duty, fewer would be ready to leave life, where love still spoke, shone, supported, and attracted."

This might be a suitable text for this paper.

"It is exceedingly difficult, but exceedingly important, to convince

some relatives that certain patients are actually suicidal. Some will even admit that their relatives are mentally sick, but surely they wouldn't do anything like that, they say. The general practitioner should clear his own skirts by telling the relatives of any depressed patient that suicide is a possibility and that the responsibility is theirs."

Dr. Karl A. Menninger, noted psychiatrist, in a letter to this writer, said in part:

"I am very interested myself in the subject of suicide, and I think you are quite right in thinking the public should be better educated in the methods of preventing its occurrence."

He also authorized me to use anything that he had written that I should care to reproduce. I quote Dr. Menninger:

"Suicide is a form of death which should concern physicians no less than do tuberculosis and cancer. It has signs and symptoms, and hence can be recognized before it is fatal. Properly treated, it can be prevented. As guardians of the public health, therefore, it is the doctors' duty to attack the problem of suicidal death by scientific methods.

"There are certain practical consid-

erations that should be drawn as a moral from a study of suicide: (1) All depressions and all other evidences of adaptation failure should command the physician's attention. (2) All depressions should be treated as potential suicides. (3) Rarely should they be treated at home. This is inadequate and it is dangerous.

"Physicians must aid in the solution of such maladjustments and in the prevention of disasters such as these. Because of their familiarity with the mechanisms of human failures, their knowledge of the queer-ness of people, psychiatrists may assist in preventing some of the otherwise inevitable defeats. The earlier and milder cases are the task of the family physician, who, in many instances, must act in the capacity of psychiatrist, distinguishing between benign and malignant cases. He must practice minor psychiatry just as he practices minor surgery. Major psychiatric problems should be sent to the hospital, just as one sends major surgical cases to the hospital.

"The responsibility for the prevention of death by suicide lies with the doctors. The family physician especially must assume this burden, because his early contact with potential cases, supplemented by his knowledge of the possibilities, can lead to an effective handling of these emergencies."

Dr. Frederick L. Hoffman, eminent health statistician, who has specialized in suicide data more than thirty-five years, said in his last annual statement for publication about suicide:

"Something is radically wrong with our civilization that so vast an army of men and women, young and old, rich and poor, should find the conditions of existence intolerable. The question naturally arises whether any considerable number of such suicides could be prevented. In the light of my investigations over many years I am absolutely satisfied that this would not be impossible."

One writer says:

"In the work of preventing suicide we would mention a few personal observations which suggest the situation and its needs:

"Anyone in great trouble minus hope is in great danger, but anyone in great trouble plus hope is safe. The object of this work is to instill hope.

"We agree with Dr. Frederick L. Hoffman, the statistician, who says: 'Suicide more frequently claims the well-to-do, prosperous, and well-educated, rather than the unfortunate, the ignorant, and the poor.'

"We believe these words of H. O. Palmer: 'A comparatively small number of suicides is attributed to insanity.' Also what Dr. Gray says: 'In the majority of cases suicide is committed by persons who are entirely sane.'

"A few words spoken at the right time and in the right way will usually inspire courage and hope. Sometimes money is absolutely necessary. We have known a loan of five dollars to save a life.

"The general superintendent of Bellevue Hospital says: 'Suicides should be reached before they believe that there is nothing further in life. I think aid or advice would do much to save them.'

"If Dr. Lyman Abbott's words be true, 'Suicide solves no problem, ends no experience, brings no possible peace,' then we should guard any who are morbid. When Lincoln wrote, 'I must die or be better,' his friends watched him day and night.

"A fund for the publication of properly prepared literature would save many lives.

"Dr. Marselli says: 'One class of persons which gives very few suicides consists of those devoted to religion.' A person rescued from suicide usually becomes a Christian, the one and only sufficient and efficient remedy.

"The sanctity of human life should be preached in pulpits, taught in schools, and be brought before theatres."

Says another writer:

"I believe that in many cases nourishing food would help dispel the foreboding gloom that has taken possession—replacing sadness with cheer and hope renewed.

"This question of nutrition concerns each one of us and should claim very special attention—not more abundant, but more cautiously selected. A starved body means fear, self-pity, self-distrust—inability to

face life's disappointments and difficulties.

"Indeed, one finds one's self a poor fighter as life's present or future difficulties present themselves, either in remembrance or in anticipation.

"To be blessed with ambition and success we must build up a strong body for the higher superstructure of the mind; more sleep to rest the troubled brain; fresh air, deep breathing-in of Heaven's health-invigorating oxygen, healing from the trees, some simple diversion — all these help to fortify the body, soul, and spirit.

"Milk is a perfect and complete food, rich in precious elements imperatively needed to give strength and vigor.

"Try taking a quart a day. Test it, and see how it will help you!

"Look out and not in. Look upward in prayerful thought to God in His Heaven! Reach out a helping hand to others when possible! You will bring healing into your own wounded heart by so doing.

"Count your remaining blessings; take up your burden. Yours is the common lot. Lift it bravely. Do not

drag it too unwillingly, lest others, seeing, may themselves lose hope and courage.

"Do all in your power to help yourself.

"Try to dissipate the evils of depression and self-pity.

"Resolve and you will have entered the pathway to success and self-recovery.

"Remember that the perpetuity of a single thought is insanity. Break its power; seek some harmless diversion to interrupt the strain that presses.

"Do not dwell with your sorrow, or upon it. Forget yourself so far as may be possible.

Coincident with Dr. Menninger's repeated assertions, in discussing suicide, that the responsibility for the prevention of death by suicide lies with the doctors, is the sad fact that sixty-two physicians died from that cause in a recent year, leading in number nearly all professions, as the usual list shows. It would be difficult to stress the significance of these tragedies, in the motives and causes which impelled them.

Another Staff Change

WE are able to announce a material change in the staff of the State Board of Health which became effective about November 1st. Dr. M. V. Ziegler, who has been acting director of the Division of County Health Work for some time, has been recently transferred to staff duties of the United States Public Health Service at Washington. Dr. Ziegler was assigned to duties here at the request of Dr. Parrott soon after the latter became State Health Officer, July 1, 1931. Dr. Ziegler has had many years experience in public health work. He has a sound knowledge of the fundamentals and is blessed with enthusiasm and an optimistic attitude. His service here has been pleasant and he has made a

definite contribution to the program of work as now carried on throughout the State. In his new and wider service at Washington he should be able to contribute much to advancement of public health throughout the country. He takes the goodwill of his coworkers with him to his new field. Dr. Ziegler is succeeded by Dr. R. E. Fox, who becomes director of the Division of County Health Work. Dr. Fox is 35 years old. He is a graduate of the University of Pennsylvania Medical School and holds a degree in Public Health from Harvard. He is an experienced county health officer, having been health officer of Buncombe County for more than three years. Dr. Fox should make a most useful and successful division head.

The Mouth Health Survey In the North Carolina Schools

By ERNEST A. BRANCH, D.D.S., *Director, Division of Oral Hygiene*

(This is the first of a series of articles by Dr. Branch on the Mouth Health Survey in North Carolina. Others will follow.—EDITOR'S NOTE.)

ON February 20 and 22, 1934, every schoolhouse door in the State was thrown open and into the classrooms went seven hundred members of the North Carolina dental profession. On these two days these dentists closed up their own offices, rolled up their sleeves, and went to work giving liberally of their time and services, and without financial remuneration. Had it not been for the wholehearted support of these men, the Survey would have been impossible of accomplishment. Through their efforts the mouths of over 325,000 children in the State of North Carolina were inspected.

The educational value of this work alone cannot be over-emphasized. To an appalling number of children this was their first sight of a dentist, that is—as a dentist. Many of them had never been to a dentist at all; many of them had gone only to have aching teeth extracted. During the Survey the child and the dentist were brought into intimate contact. The school people all over the State have not been blind to this opportunity for health teaching, and principals and teachers have been quick to take advantage of it. In numerous ways the Survey is being followed up and an effort is being made to keep the importance of a clean, healthy mouth constantly before the child. A great deal of credit for the success of the Survey is also due to this spirit on the part of the school people.

Valuable as the educational phase of the Survey is, it is, after all, only a part of the good that is expected to result. It is an acknowledged fact that the first signs of undernourishment are manifest in improperly calcified enamel of the teeth. It is also a well-known fact that decayed and

broken-down teeth, gumboils, and abscesses are perhaps as potent factors in the promotion of mischief in the physical well-being of the child as are the proverbial "idle hands" in other fields. Too few mothers realize that a child with such conditions in his mouth is, if not actually a sick child, certainly one whose resistance is being undermined and worn away; too few of them comprehend that even the sturdiest and most robust of children fall easy prey to infectious diseases, once their resistance is lowered; and too few of them know that the degenerative diseases (heart disease and kidney disease) are frequently caused by infections from the teeth.

The primary purpose of the Mouth Health Survey was to better the mouth health conditions of the children of North Carolina. Where mouths were found to need attention, the North Carolina State Board of Health so notified the parents of the child, and urged them to take him to their regular dentist for further examination and correction.

When the Mouth Health Survey was being planned we hoped to reach 20 per cent of the school enrollment, or approximately 200,000 children. We felt that for the dentists to give up two entire days to making this inspection was all that we could possibly ask, and we felt that in these two days it would be impossible to reach more than 200,000. However, we sent out more than 325,000 blanks and tongue depressors, and many dentists, in order to complete their counties, gave more than two days of their time. We hope that the number of children who are taken to dental offices for attention as a result of this Survey will also exceed

our expectations. It is the responsibility of the individual parent. We hope they will realize its importance. As stated many times before, Public Health often finds itself in the position of a mother who, without recourse to the switch or other maternal forms of punishment, can only warn and hope. After the notice reaches the parent to the effect that the child needs dental attention, there is little that we can do except to hope.

However, there is much that the mother can do. When these children go to the dentist, especially if it is their first visit, they should be accompanied by their mothers. There are both right and wrong ways for the mother to prepare the child for his first visit to the dentist. We do not expect to mention the wrong way. It would greatly minimize the difficulties of the dentist if the mother would create the impression in the child's mind that it is a pleasant experience and a friendly visit. It would be of material assistance if she would tell the child the many qualities a good dentist possesses which will appeal to the child. Then, when the office is reached, the dentist is ready to begin where she left off.

There is much that the dentist can do in addition to corrective work. He can discuss with the mother and the child foods and food values, and proper health habits. Proper health habits with regard to the mouth and teeth will be emphasized. The child is often so impressed with the importance and value of the toothbrush that the mother's task in getting him to brush his teeth will be practically eliminated.

Decayed teeth will be filled, and such teeth as need to come out will be extracted. These operations will be performed in such manner as to assure the child understanding the necessity for them. If he has a clear understanding of the matter, in few cases will he be unruly, even when it is necessary to give him pain.

The main purpose of the Mouth Health Survey was to get the child to

visit his dentist before pain drives him, and to teach him why it is necessary that he go. It is not difficult to teach him in simple language that if he waits until his aching teeth force him to go, frequently his body has absorbed sufficient infection from abscessed teeth and diseased gums to make him a cripple for life.

When the child returns to his home the mother again has an opportunity to reinforce the teaching of the dentist by reminding the child of the facts stated by the dentist. If she does not accompany him to the office, she loses a great deal of the benefit of the dentist's teaching. That is the reason we insist that the mother accompany the child on his first visit, if not on subsequent ones. We want the mother and the child to become better acquainted with the dentist, and we want the dentist and the child to become fast friends.

BOOK REVIEW

PRACTICAL TALKS ON HEART DISEASE.

By Geo. L. Carlisle, M.D., Associate Professor of Clinical Medicine, Baylor University, Dallas, Texas. Publisher, Charles C. Thomas, Baltimore, Maryland. Price \$2.00 postpaid.

This little book of 153 pages, including an excellent index, is designed to cover most of the common findings which the general practitioner may expect to encounter in a patient suspected of having heart disease. The book is clearly and simply written and, in the opinion of this reviewer, it is not only helpful, but exceedingly interesting. Its most significant message is to reassure the general practitioner of medicine who feels and believes that heart disease is difficult to diagnose and treat. The chapters on "Heart Block" and "Cardiac Neurosis" should be read by every active practicing physician. As the author states in his preface, this book is "different in its method of presentation." It is easy to agree with the author that the "most necessary man in the practice of medicine is the family doctor." For him the book is written.

Cigarettes, Women, and Babies

ON October 9 the *News and Observer* published a letter from Mr. W. F. Marshall, an old and respected newspaper man of Raleigh. In this letter Mr. Marshall took the position that the high infant death rate in North Carolina might be due to cigarette-smoking mothers through their expectant period as well as during the infancy of the baby. Mr. Marshall stated that in his opinion "the tremendous advertising drive begun a few years ago to make a market for the 'stinkies' among girls and young women is about due now to be showing results that it is only natural to expect." Mr. Marshall concluded his letter by stating that, "I know of no statistics showing the effect of cigarette smoking upon infant mortality in North Carolina," etc.

The next day, October 10, the editor of the *News and Observer* devoted some space in an editorial to Mr. Marshall's contention. The title of the editorial was "Too Easy." The editor suggested that "This would be a very simple world if the cause of all our troubles could be as easily pointed as Mr. W. F. Marshall would point the cause of high infant mortality rates in North Carolina." Further, to quote the editorial, "The cigarette may be a great evil. Smoking them is certainly a costly and useless habit. But to place upon cigarettes the blame for infant mortality in North Carolina is to shut all eyes to the carelessness, ignorance, and filth which every day in North Carolina kill more babies than all the tobacco grown since the weed was first discovered in use among the Indians of America has killed via the pipe, the snuff-box, and the cigarette."

On October 15 the *News and Observer* published a letter from Mr. John B. Palmer, of Warrenton, North Carolina. Mr. Palmer quotes some of

Mr. Marshall's statements, and then adds the following:

"These are startling charges. Mr. Marshall should give the names of 'a noted physician' and 'another prominent physician' referred to in his article. THE HEALTH BULLETIN, a publication highly esteemed in North Carolina, shows on the front page of its October issue an alarming increase in infant deaths in North Carolina for the first seven months of 1934.

"The November issue of THE HEALTH BULLETIN cannot let these charges go unchallenged. The public expects Mr. Marshall to give the names of the physicians making the charges, and further expects THE HEALTH BULLETIN to give a scientific medical viewpoint on 'Cigarettes and Babies.'"

In the same issue of the *News and Observer* Mr. Marshall comes back with another letter devoted to attention to the editorial just above quoted.

We are quoting the above for several reasons: First, we are receiving an increasing number of letters at the office of the State Board of Health from people wanting to know what we know about the effect of cigarette smoking on the mothers of the State; second, when thinking men like Mr. Palmer, Mr. Marshall, and the editor of the *News and Observer* devote time and space to a discussion centering around issues appearing in THE HEALTH BULLETIN, and particularly in such complimentary terms as Mr. Palmer uses, we feel that those gentlemen as well as our reading public should have a statement from us in this connection. Therefore another reason for the attention at this time to this subject is that the State Board of Health, nor any other scientific organization in the country, has at present any definite information as to just what effect, if any, the smoking of cigarettes will have on an

expectant mother or the mother of a young infant. Whenever scientifically determined facts are available on this subject we will surely present to our readers an unbiased opinion in the matter.

While we are on the subject, we take this means of again repeating what we have said many times before, that scientific opinion has well demonstrated throughout the world in the past that the smoking of ciga-

rettes or the use of tobacco in any form by children or immature adolescents before the age of maturity is harmful in the extreme. It is a habit that can do no good at that time, and may do a great deal of harm. The use of tobacco is a habit, pure and simple, and as such should not be formed until after an individual is fully grown. The last chapter on the use of tobacco has by no means been written yet.

Public Health Service In the Counties of North Carolina

By R. E. Fox, M.D., Director, Division of County Health Work

IT is one of the functions of our Government to assume the responsibility for the protection of the public health of its citizens. President Roosevelt, in addressing the Legislature in the State of New York while Governor of that State, stated:

"The success or failure of any government in the final analysis must be measured by the well-being of its citizens. Nothing can be more important to a state than its public health. The State's paramount concern should be the health of its people."

The State, by its constitutional authority, is responsible for the health of its citizens. The State in turn has delegated a part of this power to Federal and local governments. The State of North Carolina, through its Legislature, has placed much of this responsibility upon our counties and cities. Our local governing bodies have assumed this obligation in varying degrees. Some have provided generously for this protection of the health of its citizenship. Others have assumed only a small portion of their responsibility.

The State Board of Health recognizes that the most important part of our public health service is that performed by the local health workers who come into daily contact with the public. This department is dependent

upon the local boards of health to give application to its policies and State-wide services. The absence of local health machinery places an added responsibility on the State in its efforts to protect the public health. Modern science, through its discoveries, and the extension of our knowledge of chemistry, bacteriology, physiology, engineering, and the allied sciences, has not only transformed medicine from an art to a science, but has created the whole field of preventive medicine and the scientific attack upon disease. The various forces which have created many of our public health problems have given us the means to protect the public against the ravages of disease and inefficiency, when these forces are properly utilized.

Our experience clearly demonstrates that the application of modern health practices for a rural area is best attained through a County Health Department under the direction of a full-time trained Public Health Officer, who is capable of developing a complete and well-rounded program for county-wide service.

By the term, "a full-time health unit," we mean a corps of trained public health workers who devote their entire time to the protection of the public health within a governmental unit. Such a unit consists of

a health officer, one or more public health nurses, one or more sanitary inspectors, and a clerk-stenographer. With modern means of transportation and communication, it is now possible for a trained corps of workers to provide health service to a unit of population of 50,000 living within a county area.

During the last few years the administrative problems in connection with maintaining continuous local health service have been quite perplexing, owing to the reduction in appropriations from local, State, and Federal sources; which, in turn, has necessitated budgetary changes, affecting personnel, and the curtailment of important services. However, in spite of these many vicissitudes, and with the wholehearted cooperation and personal sacrifices made on the part of our trained personnel, we have been able to continue thirty-six whole-time County Health Departments up to January 1, 1934. Since that time full-time county health service has been extended to five additional counties. There are at present forty-eight counties operating under full-time local health service. Of this number, forty counties are under the direction of a full-time health officer, and in eight counties the work is in charge of a sanitary inspector or a public health nurse. The personnel of these health departments provide health service to 1,780,960 persons. There are now 1,389,313 people in the State of North Carolina that are not provided with local health service.

This service is rendered by thirty-six health officers, five assistant medical officers five dental officers, seventy-one public health nurses, thirty-seven sanitary inspectors, four laboratory technicians, and thirty-six clerk-stenographers. The per capita cost in those counties having full-time health service during the fiscal year 1933-34 was 22 cents per capita, as compared with a cost of 25 cents per capita for the fiscal year 1932-33. The per capita cost in the various counties varies from a low of 9 cents

per capita to a high of 72 cents per capita.

It became necessary during the period July 1, 1932, to June 30, 1934, to reduce the State's subsidy for local health service from a maximum of \$2,400 to \$1,500 per annum because of the economy program under which the State of North Carolina has been operating during the last two years.

There are a number of counties not heretofore carrying full-time local health service that are ready to be organized on a full-time basis. The further development of new services has not been prosecuted as energetically as might be possible during the past year, owing to the limited funds available from the State Board of Health. And then, too, it was thought advisable to render every effort to continue existing services rather than to develop new services.

With the improvement in the economic recovery, the demands for local health services are becoming more pressing, and it is felt that the State Board of Health should encourage the development of these services along county or district lines, since there are fifty-two counties in the State of North Carolina which have no type of full-time health service.

There are a number of counties, both from the standpoint of assessed valuation and population, that are unable to maintain health service on their own resources. The plan whereby two or more counties are combined into a health district, with financial assistance from the State Board of Health, offers the best solution for providing local health service to this type of county. There are at present two District Health Departments in operation in this State, each embracing three counties.

The type of service rendered in local health departments follows closely along the lines of the public health practices and services approved by the North Carolina State Board of Health. In only a few of the larger health departments is it possible to carry out all the practices and policies recommended.

Expense of Sickness

HOW formidable an item illness is in the list of economic wastes is indicated in surveys that have been taken to determine how much sickness really costs the citizens of our country each year.

Facts determined in one survey show that an electric service company estimates the cost of illness at \$28.50 per employe per year. Another manufacturer places the loss for each employe at \$125 per year. Estimates of loss of time due to illness range from seven to nine days per employe. A large store found that employes needing dental work, having uncorrected eye defects, being 15 per cent over or under weight, or having defects commonly considered unimportant, lost 12 per cent more time than employes rated as class A, who were free from defects.

Experience has shown that much of the economic waste due to illness can be checked. One store averaging 4,000 employes over a period of three years has found that after installing medical supervision, according to their health records, a loss reduction was shown in the second year, as compared with the first, of about 8,000 working days, or an estimated saving in wages and compensation alone of \$29,094. The third year, when compared with the first year, showed a saving of 16,000 sick days. As a part of these total savings, a campaign against colds was followed by a reduction of 3,143 cases, with a saving of 5,495 days, giving an estimated reduction in lost wages of \$16,814.70.

Such instances of time and money lost due to illness are startling when we think about them, and impress upon us the need of more caution directed toward maintaining our good health. Simple precautions, especially in winter, can save us much illness and the consequent expense.—*Reidsville Review*.

DR. ZIEGLER TRANSFERRED TO WASHINGTON



DR. M. V. ZIEGLER

Nearly three years ago Dr. Ziegler, a staff officer of the United States Public Health Service, was assigned to the North Carolina State Board of Health as a consultant in the administrative department. He has recently been called to Washington to assist in a Nation-wide expansion of county health work by the Service. Dr. Ziegler has contributed materially to the success of public health work in North Carolina during his stay here. He was highly regarded by Dr. Parrott and carries with him the best wishes of the organization of the State Board of Health.

Men used to die for their country, their religion, or their right of free speech; but now they die trying to make a curve at sixty miles an hour, racing a locomotive for a crossing, or competing with some other motorist for the exact center of the road.—*Reidsville Review*.

Birth and Infant Death Rates, 1933, By Counties

	Total Live Births	Total Infant Deaths (Under 1 year.)	Rate (Per 1,000 Live Births)		Total Live Births	Total Infant Deaths (Under 1 year.)	Rate (Per 1,000 Live Births)
TOTAL—STATE.....	75,322	4,974	66.0	Jackson.....	479	26	54.3
Alamance.....	1,033	36	34.8	Johnston.....	1,576	101	64.1
Alexander.....	318	18	56.6	Jones.....	284	26	91.5
Alleghany.....	165	10	60.6	Lee.....	359	24	66.8
Anson.....	678	36	53.1	Lenoir.....	838	98	116.9
Ashe.....	519	22	42.4	Lincoln.....	571	29	50.8
Avery.....	347	16	46.1	McDowell.....	538	38	70.6
Beaufort.....	804	70	87.1	Macon.....	375	19	50.7
Bertie.....	712	67	94.1	Madison.....	546	31	56.8
Bladen.....	687	45	65.5	Martin.....	705	55	78.0
Brunswick.....	469	18	38.4	Mecklenburg.....	2,371	154	65.0
Buncombe.....	1,789	125	70.0	Mitchell.....	428	21	49.1
Burke.....	673	23	34.2	Montgomery.....	316	19	60.1
Cabarrus.....	994	71	71.4	Moore.....	566	27	47.7
Caldwell.....	844	53	62.8	Nash.....	1,270	94	74.0
Camden.....	96	10	104.2	New Hanover....	855	49	57.3
Carteret.....	387	28	72.4	Northampton....	619	39	63.0
Caswell.....	451	32	71.0	Onslow.....	449	19	42.3
Catawba.....	1,064	56	52.6	Orange.....	389	20	51.4
Chatham.....	397	19	47.8	Pamlico.....	269	6	22.3
Cherokee.....	376	16	42.6	Pasquotank.....	423	41	96.9
Chowan.....	266	33	124.1	Pender.....	398	27	67.8
Clay.....	136	6	44.1	Perquimans.....	246	13	52.8
Cleveland.....	1,249	54	43.2	Person.....	577	25	43.3
Columbus.....	1,065	86	80.8	Pitt.....	1,502	124	82.6
Craven.....	652	60	92.0	Polk.....	231	23	99.6
Cumberland.....	1,137	89	78.3	Randolph.....	885	35	39.5
Currituck.....	137	10	73.0	Richmond.....	832	61	73.3
Dare.....	124	12	96.8	Robeson.....	1,904	140	73.5
Davidson.....	1,095	41	37.4	Rockingham.....	1,259	55	43.7
Davie.....	329	19	57.8	Rowan.....	1,220	68	55.7
Duplin.....	920	63	68.5	Rutherford.....	1,045	50	47.8
Durham.....	1,639	126	76.9	Sampson.....	1,101	77	69.9
Edgecombe.....	1,173	94	80.1	Scotland.....	510	41	80.4
Forsyth.....	2,355	182	77.3	Stanly.....	701	35	49.9
Franklin.....	705	47	66.7	Stokes.....	511	18	35.2
Gaston.....	1,749	109	62.3	Surry.....	987	58	58.8
Gates.....	219	13	59.4	Swain.....	244	11	45.1
Graham.....	116	9	77.6	Transylvania....	248	16	64.5
Granville.....	724	47	64.9	Tyrrell.....	142	19	133.8
Greene.....	509	41	80.6	Union.....	985	49	49.7
Guilford.....	2,666	151	56.6	Vance.....	616	52	84.4
Halifax.....	1,442	126	87.4	Wake.....	1,913	157	82.1
Harnett.....	1,091	68	62.3	Warren.....	671	56	83.4
Haywood.....	727	47	64.6	Washington.....	297	26	87.5
Henderson.....	567	36	63.5	Watauga.....	440	30	68.2
Hertford.....	380	34	89.5	Wayne.....	1,113	89	80.0
Hoke.....	360	34	94.4	Wilkes.....	1,061	48	45.2
Hyde.....	185	10	54.0	Wilson.....	1,167	110	94.2
Iredell.....	966	67	69.4	Yadkin.....	398	16	40.2
				Yancey.....	406	24	59.1



